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Analysis Of Prehistoric Ceramics From A Fourteenth-Century Native American House, Carter Robinson Site (44Le10), Lee County, Virginia

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ANALYSIS OF PREHISTORIC CERAMICS

FROM A FOURTEENTH-CENTURY NATIVE AMERICAN HOUSE,

CARTER ROBINSON SITE (44LE10), LEE COUNTY, VIRGINIA

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ABSTRACT

Chiefdoms located on the frontier of the Mississippian world have not been examined in great detail, yet they have the potential to provide evidence for the emergence of hierarchy and the interaction of hierarchical and egalitarian societies. Frontiers can help identify the emergence and maintenance of power in Southeastern chiefdoms. Carter Robinson (44LE10) is a frontier site that can help understand the degree of interaction between hierarchical and non-hierarchical groups nearby. This thesis will analyze the ceramics at Structure 6 based on the 2015 excavation at Carter Robinson located in Lee County, Virginia. The use of attribute and morphological analyses are used to understand occupation time of activities within the structure. The purpose of this thesis is to analyze ceramics from Structure 6 at the site to date the structure, identify its function, and its degree of interaction with other households, such as intermarriage at the site and non-Mississippian populations living nearby.

DEDICATION PAGE

To my family who have been there for me from the very beginning.

LIST OF ABBREVIATIONS AND SYMBOLS

cm(s)	centimeter(s)
cmbs	centimeters below surface
cmbd	centimeters below datum
g	grams
l	liters
m	meters
mm	millimeters

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CHAPTER I: INTRODUCTION

The Mississippian period (A.D. 1000-1600) is recognized as the time when hierarchical societies known as chiefdoms emerged in the native Southeastern United States (Pauketat 2007:82). There are many definitions of what indicates a chiefdom, but one common attribute is that they are hierarchical or have social stratification (Service 1993; Carneiro 1981; Earle 1987). I define chiefdoms as societies with institutionalized inequality that is visible archaeologically through differential house sizes, unequal access to trade goods, and differences in subsistence among members of a chiefdom. Mississippian sites such as Cahokia in St. Louis and Etowah in northwest Georgia have clear archaeological indicators of inequality: differential house sizes, dietary remains, and trade goods (Blitz 1993; Hally 1993; King 2007). Chiefdoms located on the frontier of the Mississippian world have not been examined in great detail, yet they have the potential to provide evidence for the emergence of hierarchy and the interaction of hierarchical and egalitarian cultures (Herr 2001; Meyers 2017).

Areas of social interaction between two different groups, like frontiers, leave material culture remains that archaeologists can use to identify the nature of interaction. According to King and Meyers (2002:114), frontiers "are geographic areas along the edge of advancing or retreating wave fronts of Mississippian forms of organization." The frontier areas between hierarchical and non-hierarchical groups have the potential to shed light on information about how hierarchies form (Meyers 2017:1). One hierarchical area with this potential is the

Mississippian cultural period (A.D. 1000-1600) located in the Southeastern United States (Anderson 1994:3). One edge of the Mississippian world was located in southwestern Virginia, at the Carter Robinson site (44LE10). Previous studies at this site have identified social interaction between Mississippian groups from the Norris Basin with non-hierarchical indigenous groups from southwest Virginia, known as the Radford culture (A.D. 900-1600) (Meyers 2015:229). This interaction is specifically identified in the ceramic materials, which show a change in temper and surface decoration over time that indicates social interaction occurred (Hegmon 1992:529).

The Carter Robinson site (44LE10) is located in Lee County in southwestern Virginia and was occupied for approximately 150 years beginning in A.D. 1250 (Meyers 2017:1). This site contains a mound and village. To date, six structures have been partially excavated, and shovel-test survey and geophysical explorations at the site suggest up to 20 more are present (Meyers 2002:179). Excavations over four seasons at the site have identified over 90,000 artifacts including ceramics, lithics, animal bones, and shell beads.

The work that Meyers (2011, 2015, 2017) has done indicates that the people that occupied Carter Robinson migrated from the Norris Basin region. At this time in southwestern Virginia, the Radford culture was present from A.D. 900-1600 (Meyers 2017:3). The Radford culture were mixed horticultural hunter-gatherer tribes (Egloff and Woodward 1992:28). They lived in villages without mounds, often along floodplains (Meyers 2015:229). The house structures in these villages were circular (Egloff and Woodward 1992:26). At the same time, burial evidence suggests a lack of social stratification was present, at least until after contact with Europeans and the advent of the deerskin trade (Lapham 2011). The Radford pottery type is limestone-tempered, unlike the predominantly shell-tempered Mississippian pottery (Egloff

1992:201). A typical large Radford site is the Crab Orchard site (44TZ1) in Tazewell County, north of Carter Robinson. This site contained multiple houses and a double palisade (Egloff 1992:195).

The house structures at the Carter Robinson site show evidence of change over time and increasing interaction with Radford peoples nearby. In the early occupation of this site (A.D. 1250-1300), there was grit-tempered and some limestone-tempered pottery, and Structures 2 and 3 were occupied (Meyers 2017:6). Next, during the middle occupation (A.D. 1300-1350), shell-temper began to be mixed with grog, grit, and grog and grit together and Structures 1, 2, and 4 were occupied (Meyers 2017:6). In the last occupation (A.D. 1350-1400), shell-tempered pottery alone was the dominant temper and Structures 1, 2, and 4 were occupied (Meyers 2017:6) (Figure 1). The pottery types suggest that over time the Mississippian people interacted with Radford groups to the extent that they shared and combined ceramic technologies (Meyers 2017:4).

At Carter Robinson, Structure 6 is located 90 meters south of the mound, and it is the farthest house structure in this direction (Meyers 2015:235). In 2006 and again in 2013, both geophysical survey and shovel testing identified probable structural remains in this location. Excavations in 2015 identified the interior of a structure. These excavations uncovered two large interior posts, multiple small posts, portions of a midden, and a hearth. These excavations suggested that Structure 6 is a typical Mississippian household, primarily because of the two large interior posts located at the corners around the hearth, and because of the artifacts, particularly ceramics, recovered there.

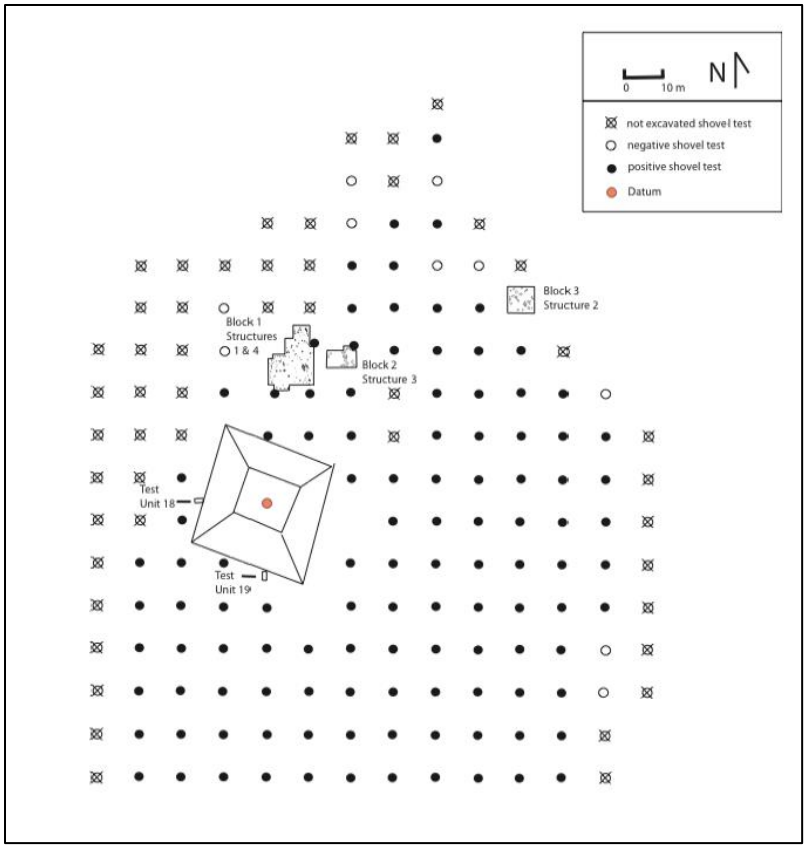

Figure 1. All shovel tests before 2013 (Meyers 2011:142).

This thesis analyzes Structure 6 ceramics to date the structure, identify its function, and assess its degree of interaction with other households at the site and with non-Mississippian populations living nearby. The temper of ceramics from Structure 6 will be compared to past studies of ceramics from the site to see the time of occupation (Meyers 2011; 2017). Surface decoration can be used to identify changes in ceramics over time. In addition, a morphological analysis of vessels allows for a more precise understanding of activities within the house and to allow a comparison of Structure 6 with other structures (Smith 1978:489). Lastly, I compare the temper, surface decoration and vessel morphology from Structure 6 to ceramics from other structures in the community.

The historical background and theoretical frameworks of this study are presented in Chapter 2. In Chapter 3, the field methods and results of excavations at the Carter Robinson site are described. Chapter 4 discusses the specific research questions and how ceramic analyses are used to answer them. Chapter 5 presents the results of the ceramic analyses. Lastly, Chapter 6 summarizes the study and discusses how the attribute analysis was used to identify the occupation and type of structure, and suggests future research questions based on this work.

CHAPTER II: LITERATURE REVIEW

The Mississippian period (A.D. 1000-1600) is defined by the presence of chiefdoms and associated social hierarchy. Located across the Southeast, the Mississippian cultural area extended from central North Carolina to Missouri, and from Kentucky to Florida (Pauketat 2007; Smith 1978). Important and large Mississippian sites include Cahokia in St. Louis and Etowah in Georgia (Hally 1993:143). Chiefdoms are important because they are considered the precursors to state societies, and they are a sociopolitical organization with permanent inequality (Carneiro 1981:68). Although the core of the Mississippian world is well-defined, at its edges were zones of interaction. Studies of the Mississippian world have examined frontier or periphery sites (Blitz and Lorenz 2002; King and Freer 1995; King and Meyers 2002; Meyers 2002). Frontiers are able to show a degree of interaction between Mississippian and non-Mississippian cultures in an area (Meyers 2011:1). This can be seen through the types of settlement patterns or temper in ceramics. This chapter reviews the literature on chiefdoms and specifically Southeastern chiefdoms to help better understand frontier sites on the edge of the Mississippian world.

Throughout the history of archaeology, there have many different definitions of a chiefdom (Carneiro 1981; Earle 1987; Service 1993). These definitions range from redistribution of goods (Carneiro 1981:48) to the importance of ideology in a society (Earle 1987:298). A general definition of a chiefdom is that it is a form of hierarchical power within a stateless society that is often kin-based (Service 1993:112). Chiefdoms used to constitute as a major stage

in the political development of pre-state societies (Carneiro 1981:67). This unilineal perspective is not used today; however, the term 'chiefdom' is useful for referring to social organizations with institutionalized inequality. Elman Service (1993:125) suggested that redistribution of goods is not the key to defining chiefdoms. Redistribution is an economic system whereby a chief gets tribute from chiefdoms under his control and redistributes the surplus to everyone else in the society, usually in times of crisis (Service 1993:132). At the same time, Service (1993:131-132) identified different criteria for simple to complex societies throughout history and believed that societies progressed from egalitarian to state-level societies in a unilineal progression.

Although redistribution was an important feature in early definitions of chiefdoms, additional studies identified other markers (Carneiro 1981:37). Carneiro (1981:37) focused on the political nature of chiefdoms. He (1981:45) defined chiefdoms as "an autonomous political unit comprising a number of villages or communities under the permanent control of a paramount chief." This definition is different from earlier scholars because it focuses on the political role of the chief. Carneiro (1981:58) questioned how much chiefdoms actually used redistribution as a form of control. Instead, he suggested that warfare played a key role in keeping power within or under a central leader (Carneiro 1981:63). Warfare is not always used in a society, but the acquisition of land through warfare can increase chiefly power.

Following Carneiro, Earle examined the interrelation of other facets of chiefdoms. According to Earle (1987:279), understanding chiefdoms means examining their economy, politics, and ideology together. Rather than rely on redistribution, Earle focuses on the use of control in a society by the chief (Earle 1987:292). Control of goods is important because the chief has the power to determine how goods will be used. Tied to economics is the chief's

political power, specifically the scale of integration with a centralized decision-making hierarchy (Earle 1987:288). When Earle (1987:288) talks about the scale of integration, it refers to the size of the chiefdom and the increased political complexity. The population density of the area is what affects the cost of integration and control (Earle 1987:289). At the same time, centralized decision-making is necessary because of polity size and spatial distribution (Earle 1987:289). The spatial distribution of the people can alter hierarchy. It seems more the people in a society, the more one needs to keep control (Pauketat 2007:87), although that is not necessarily true for all societies.

An important part of defining chiefdom today is its organization as a multiple-community political entity. Hally (1993:143) states that chiefdoms are comprised of multiple interrelated communities located across a similar landscape. In north and central Georgia, these communities tended to be as large as 40 km and separated by between 18-32 km, and were defined on the presence of Mississippian components such as platform mounds and similar pottery types.

Although the anthropological definition of chiefdoms has changed over time, there is always the presence of institutionalized inequality within chiefdoms. Following Service (1993:133), I define chiefdoms as groups that have social stratification of goods, power, and economics in a society. The following section will examine chiefdoms and their variability within the Mississippian period in order to better understand chiefdoms at the edge of the Mississippian world.

In 1939, interest in trying to understand the prehistory of the Lower Mississippi River Valley (LMRV), which ranged from the mouth of the Ohio River to Vicksburg, Mississippi (Williams 2003:1), instigated a large archaeological survey (Phillips et al 1951) the results of which changed our understanding of the Native American past, and particularly how past people

built mounds. During this time, Sahlins and Service were trying to define what it meant to be a chiefdom, and Phillips et al (1951:457) recognized that the mound sites they identified during the LMRV survey were examples of pre-Columbia chiefdoms. For Mississippian period research, the more formal recognition that chiefdoms were present during this time came with the publication of an article by Peebles and Kus (1977:431-433) that identified five archaeological correlates of chiefdoms: mortuary practices that show ascribed ranking, hierarchy of settlement types and sizes, settlements that assure high degree of local subsistence, areas of productive activities outside household groups, and a correlation between environment and social organization. The data used to illustrate these correlates came from the Moundville site in central Alabama, and it more firmly defined the Mississippian period groups as chiefdoms. Since that time, much more work has been done to define these chiefdoms. This work includes a focus on settlement patterns (Anderson 1994; Hally 1993); subsistence (Blitz 1993); political organization (Blitz and Lorenz 2002); craftsmanship (Welch 1991); and ideology (King 2007). This research was also greatly aided by the reconstruction of the De Soto entrada and related ethnographic evidence (Hally et al 1990; Hudson 1988). This section discusses each of these parts of chiefdoms in more detail.

Settlement patterns in Mississippian chiefdoms were first defined explicitly by Smith (1978:480). Smith (1978:483) described Mississippian settlement as located along floodplains to take advantage of the fertile soil as well as proximity to water, and because such areas, located along the Mississippi River and its backchannels, often included oxbow lakes. These lakes would attract seasonal waterfowl and other fauna hunted by Mississippian chiefdoms. During the Mississippian period, growing corn was the main subsistence crop (Smith 1978:480). Corn agriculture enabled the populations to increase and allowed chiefs to control surplus produced.

Corn surplus allowed the chief to indebt people to him by hosting feasts. They could then pay him in labor, increasing his surplus, which could also be used to acquire extralocal goods or pay people to make them, further increasing his economic and political power (Smith 1978:496).

Although Smith (1978) identified river bottoms as the only Mississippian settlement pattern, research since then has identified more variation in Mississippian patterns not located in areas with broad floodplains or oxbow lakes (Hally 1999:97). Other research identified Mississippian chiefdoms in other areas, such as on the edge of the Mississippian world (King and Meyers 2002:113). It is important to note that settlement patterns can be examined at multiple viewpoints or lenses. Smith examined the settlement of villages within the environment, whereas Pebbles and Kus, and later Hally, examined settlement from a political viewpoint. For Peebles and Kus (1977:431), considering the environment as a factor in Mississippian settlement is important, but just as important is the hierarchy of settlement patterns of villages which reflect their position and ritual network (Peebles and Kus 1977:432). David Hally (1993:143 & 164) examined this in greater detail in northwest Georgia and identified administrative centers and primary or secondary centers depending on the distance that separates two areas. The distance between these different centers are important to understanding how the sites relate to one another. He suggested that the contemporaneous mound construction done at the administrative centers to primary or secondary centers is less than 18 km or more than 32 km (Hally 1993:148 & 132) while those more than 30 km or were not located within the same polity. According to Hally (1993:162), the distance between Mississippian chiefdoms in northern Georgia served as a way to reduce competition over natural resources.

Southeastern chiefdoms during the Mississippian period can be described as either simple, complex, or paramount chiefdoms (Anderson 1994; Blitz 1993). Simple chiefdoms have

one level of administrative control; complex chiefdoms have more than one, and paramount chiefdoms have three or more levels of administrative control (Anderson 1994:7). A complex chiefdom ruled over a few villages, all located in a geographic region (Anderson 1994:14). Paramount chiefdoms ruled over an entire geographic region and several polities and had the most control over the group (Anderson 1994:15). One example of a possible paramount chiefdom in the Mississippian world may have been Coosa, whose center was located at the Little Egypt site in northwest Georgia, but whose political alliances or control may have extended to eastern Tennessee and northeast Alabama (Hudson et al. 1985:723). These different levels of power were constantly in flux, something Anderson (1994:1) terms cycling. Cycling is the fluctuation of power or decision-making between the elites and commoners in simple, complex, and paramount chiefdoms (Anderson 1994; Beck 2003). The research on Mississippian settlement shows how there is not one type of chiefdom, but many different types across the landscape and through time in the Southeast.

At the village scale, hierarchy is present as well. According to Lewis et al (1998:5), there is a basic Mississippian town plan of mound and plaza with a village surrounding the mounds. Looking at the physical structures, mounds and house structures are able to reflect the different changes that happened on the landscape. Mounds are indicative of chiefly power, and mounds represent the longevity of a chiefdom and its power (Hally 1996, 2006:32). Although mounds were seen as a way to show someone's power, they simultaneously acted as a way to bring societies together (Hally 2006:32). Many of the mounds that are present in the Southeast were built over many generations, suggesting a link to past power. According to Hally (2006:33), there might have been many different factors that led to the collapse of chiefdoms in the

Southeast, such as the depletion of resources (Williams and Shapiro 1990:165) and loss of long-distance trade.

Subsistence

One of the major components of what it means to be Mississippian is the presence of maize cultivation (Pauketat 2007:82). Many of the Mississippian chiefdoms grew corn, and chiefs would use the surplus to host feasts. Through this, they would indebt people to him (Pauketat 2007:82). Pauketat (2007:85), discusses regional variability in how important corn agriculture was to Mississippian chiefdoms. Through the role of feasting and storage in non-state societies, one is able to show the development of social ranking (Blitz 1993:93). Commoners in chiefdoms did not decide one day to have one person take power, but through feasting, one person was able to show they could produce more and feed more people. By looking at the everyday activities of communal storage and feasting, social stratification in a society might merge.

Much of the Mississippian period was considered in a constant state of flux that was changing depending on many different factors, such as social interaction and different subsistence patterns (Hally 1996:92). There were times in the past that some areas could not survive because there was drought or failed crops (Hally 1996:118). Hally (1996:116) discusses how people might have shifted their political affiliation to other polities in the area and taken up residence in another chiefdom. This is important because corn agriculture resulted in soil infertility over time, causing people to change polities as a result (Hally 1996:118).

An aspect of chiefdom subsistence patterns is looking at the amount of power a chief has over a group. Some chiefdom theories suggested that they had chiefs or "managers" to help with the intensification of food production and external relationships (Earle 1987; Peebles and Kus 1977; Service 1993). Another theory to explain political flux in a chiefdom is the fission-fusion model (Blitz 1999:583). In the fission-fusion model, small groups fission out, or leave their settlement to create single-mound sites and then fuse back together with the original settlement's inhabitants to make a larger political unit (Blitz 1999:584). These fissions and fusions occur as a way to reduce stress of overpopulation (fission) or of warfare (fusion). This model shows how groups were able to maintain centralized power when they were together and at time fission out to help with stress either economically or politically (Blitz 1999:589).

Mississippian research has examined the role of economy in chiefdoms (Welch 1991; Muller 1997). Initially, redistribution was seen as a key part of Mississippian economies. The relevance of redistribution, however, has changed over time. According to Welch (1991:10), "redistribution is the centrally directed relocation of necessary goods to non-self-sufficient, specialized producers, typically in a geographically diversified setting." Peebles and Kus (1977:426) showed that Hawaiian chiefdoms did not necessarily redistribute the goods to the commoners. This is important because how chiefdoms attain and maintain control is different in every society. Work in the Southeast suggests redistribution is not as important as other economic forms. For example, Welch (1991:9) examined the importance of the production and exchange of prestige goods at Moundville and he concludes (Welch 1991:20) there was variability present in the way prestige goods operated within Mississippian chiefdoms. Muller (1997:44) suggests that economy during the Mississippian was more household-based rather than

controlled by a chiefdom. Overall, these and other studies suggest that there was much variation in Mississippian economies.

Research on Southeastern chiefdoms has shown there was variability in the subsistence patterns, settlement patterns, and economy during the Mississippian period. For example, simple, complex, and paramount chiefdoms were all present throughout the region over time. At the same time, there is a question as to how much power chiefs had. The fission-fusion model presented by Blitz (1999:577) suggests this also varied over time and space, and changed as circumstances needed. Mounds represented power on the landscape, but the specifics of each areas must be more closely examined to understand the variation.

Frontiers of Chiefdoms

Frontiers are seen as areas that are between two polities in the archaeological record (Parker 2003:77). There has been a lot of research on Mississippian chiefdoms in the Southeastern core, but less work on the fringes of this culture area. Chiefdoms that are identified as being on the peripheries of the Mississippian world exhibit similar features to Mississippian chiefdoms such as mound-building and shell-tempered pottery (King and Meyers 2002:113); however, even though there was interaction with the Mississippian world, there were some differences in the way these social and political systems operated in past societies on the frontier (King and Meyers 2002:115).

Initial examinations by anthropologists of frontier areas was often informed by a colonialist perspective (Lightfoot & Martinez 1995:471). According to this perspective, the core is considered the "main" culture, whereas the periphery is the "outside" culture being influenced

by the core culture (Wolf 1982). Using this perspective results in a view that there is only one core and everything on the outside is influenced only by them and not by other cores close by. Relevant to this is world systems theory which focuses on the economic angle of frontiers (King & Freer 1995; Peregrine 1991). World systems theory is where the people who are in charge exploit and/or interact with the cultures that are peripheral to them (Schortman & Urban 1987:56). King and Freer (1995:266) use this theory to explain interaction between multiple groups in the Mississippian Southeast. These interactions can be viewed at different levels, such as at the regional level where different polities interacted in the form of status-good exchange, tribute, and warfare alliance (King & Freer 1995:270).

Frontiers include social groups that are on the periphery of the cultural landscape (Lightfoot and Martinez 1995:471). Identifying frontiers in the archaeological record is difficult. The material culture at frontiers can sometimes show a merging of attributes, such as ceramic tempers or vessel forms (Lightfoot and Martinez 1995:479). These merged attributes might indicate the trade of goods as a form of social interaction between groups (Schortman and Urban 1987:53). Mississippian chiefdoms have many different forms of trade from inter-polity trade to long-distance trade. Frontiers located on the edges of the Mississippian world likely interacted with people on the periphery through trade (Schortman & Urban 1987:44).

Rice (1998:50) introduces the idea of "frontier-as-process" to show how interactions take place in certain geographical regions, instead of across the whole landscape. The degree of interaction can indicate the amount of influence that each group has on one another. The social interaction of groups can be seen at frontiers. Since frontiers are on the edge they can change depending on the form of interaction between groups in the area. Geographically, many frontiers are in areas that can be hard to enter and that can change the amount of interaction between the

groups (Parker 2003:83). At the same time, there is a dialectical relationship between interaction and the amount of influence groups have on one another in the frontier landscape.

In the Mississippian literature, frontier areas have been examined using various approaches. King and Freer (1995:268) use world-systems theory to understand the zones of interaction between the core and periphery during the Mississippian period. They argue that the core during the Mississippian period was trying to gain more political control through control of prestige-goods (King and Freer 1995; Peregrine 1991). By gaining political power, elites can maintain control within a chiefdom. Even though some core groups tried to gain control by using prestige goods, this did not always happen because they could not control other factors, such as food or land (King and Freer 1995:278). A prestige-goods system is the control of objects needed by members of a society to pay social debts (Peregrine 1991:194). World systems theory is problematic to use in the Mississippian world because it was originally used to explain capitalist economies, and so it has great limitations when applied to non-capitalist societies. It is important to note that while world systems theory is sometimes used with prestige-goods theory it is less applicable to the Mississippian world because there was no sustained and recognized core throughout the entire period (King and Freer 1995; Peregrine 1991).

Traditionally, Mississippian cultural attributes include “the adoption of intensive maize agriculture, hierarchical decision-making institutions, and ascriptive ranking” (Blitz and Lorenz 2002:117). In many frontier or peripheral societies, some of these aspects were a part of their society, but not all (King and Meyers 2002:115). At the same time, the social integration at frontiers sites can represent Mississippian and non-Mississippian structural elements (Payne and Scarry 1998:22). In the northeastern edge of the Mississippian world, such variation is present. Jefferies (2001:201) shows that chiefdoms in the Cumberland Gap vicinity are an example of this

variation. The environment in this region is more mountainous and makes it harder for movement in and out of this region (Jefferies et al 1996:2). Even though the physical environment in the area was harder to navigate, there was still some interaction between groups, as evidenced by the presence of Mississippian sites with platform mounds, shell-tempered pottery, and/or triangular projectile points (Jefferies 2001:201). This is important because there are some sites in the Cumberland Gap area that have some of these features, but not all of them. Examining the different sites in this region shows how much variation of interaction occurred with sites that are on the "edge" of the Mississippian world (Jefferies 2001:221).

Although this research has shown that political economy and subsistence are different at frontiers (Jefferies et al 1996; Welch 2001), more work is needed. Many sites on the frontier are single-mound sites, but that does not always suggest chiefly power (Meyers 2002:184). At the same time, the control of craft specialization and distribution of prestige-goods are different on the frontier (Welch 2001:227). This is seen through all the households in the community having undifferentiated access to things, such as control of craft production (Meyers 2011, 2017). Another difference on the frontier region is the subsistence in this area (Jefferies et al 1996:1). Many of the people on the frontier region did not grow maize on a large scale, likely because of the environment which lacked broad floodplains and a temperate climate (Jefferies et al 1996:25).

Virginia is located on the northeastern edge of the Mississippian cultural area; multiple mounds are present there and they represent Middle Mississippian cultural traditions (Holland 1970; Egloff 1987). Holland (1970:1) suggests there was a zone of interaction between Mississippian and non-Mississippian groups in southwest Virginia, which can be seen through settlement patterns, mound building, and pottery. The Ely Mound site (44LE12) contains one

mound and past excavations there suggest a structure may have been present on top of the mound (Egloff 1987:18). First excavated in the late nineteenth century by Harvard's Peabody Museum (Egloff 1987:18), a death occurred during the excavation and the work ceased. Little subsequent work has been done there beside some surface collections. Pottery from the mound, along with the presence of burials with high-status items like shell ear spools and a shell gorget, indicate a Mississippian affiliation for the mound. The other recorded mound site in the region is Carter Robinson (44LE10), a single mound and village site (Jefferies 2001:216). Meyers' (2011) work showed that its inhabitants were likely Mississippian, based on household style, village layout, and pottery.

The culture present in southwestern Virginia when the Mississippian people entered the region was the Radford culture (A.D. 800-1700), characterized by the presence of villages that lacked mounds, had circular buildings and limestone-tempered cord-marked pottery (Meyers 2017:2). The circular layout of these sites suggest their societies were egalitarian, although some status items are present. For example, at the Crab Orchard (44TZ1) site, copper and glass beads were found (Egloff 1992:205). Some of these items, however, may date to later, post-contact periods.

Meyers has examined more specifically the differences in political power of chiefs at this frontier as compared to the interior Mississippian area (Meyers 2006:156) and she suggests that the way chiefs gain power at frontiers may be different from other areas in the Mississippian world. For example, there is an emphasis on extraction and production of trade goods at frontiers that the core Mississippian culture area might want, such as salt and copper (Meyers 2006; 2008).

Households

Household remains can be an ideal place to identify evidence of interaction from the artifacts within the structure. Architecture is the one of the most visible physical manifestation of human culture (Lewis et al. 1998:1). There are many different structures present at Mississippian sites, including plazas, mounds, boundaries, and gates (Lewis et al. 1998:11), each of which indicate different aspects of the culture. For example, gates or palisades show that there might have been some form of warfare in the area (Lewis et al. 1998:18). When trying to understand the reason behind certain structures, one needs to understand the architectural grammar.

Architectural grammar focuses on the rules by which elements were combined in architectural expression (Lewis et al. 1998:2). According to Lewis et al. (1998:10), basic Mississippian settlement design elements include "plazas, mounds, boundaries, and gates" surrounded by house structures. The Radford architectural grammar is different: houses are arranged around a plaza with no mound, as seen at the Crab Orchard (44TZ1) and Trigg (44MY3) sites (Egloff 1992:207). Mississippian mounds, described above, were areas that represented chiefly control of labor and political power. Plazas indicate a designated area for public representations including rituals and games (Lewis et al. 1998:12). The houses were arranged around the plaza, often in a way that reflected the social organization of the group (Lewis et al. 1998:12).

During the Mississippian period, house construction changed over time, across time and space. Initially, houses were built by digging a wall trench on four sides into which small posts were inserted (Lacquemont 2007:4). These were replaced by single-set posts, which consisted of putting larger, single posts with open space in a square shape with four single posts in the middle of the structure (Lacquemont 2007:4). For both types, the open spaces were closed with wattle-

and-daub with a thatched roof (Lacquemont 2007:6). During the Mississippian period, Sullivan (1987:16) identified two seasonal types of houses: winter and summer. During the later pre-Columbia and early colonial periods Rodning (2001:238) identifies variation in western North Carolina among Cherokee houses and suggests this variation reflects widely shared ideas about social structures at this time. Depending on how a structure is made and where it is located can change the importance of the structure (Rodning 2001:245).

Ceramics

Ceramics are good indicators of interaction between groups of people. Ceramic variability can been seen through style, temper, and surface decoration (Hill 1977:56). In the beginning of ceramic analysis in the Southeast, variability between ceramics was organized by types that were defined on the basis of temper and surface decoration primarily (Phillips et al 1951). This approach showed differences between groups and across time, but did not explain change over time and it was not especially useful for identifying interaction between groups.

More recent pottery analyses now examines attributes rather than placing ceramics into static typologies. Standard attributes include temper, surface decoration and vessel form, but can also include data on grain size and paste as a way to identify variation within ceramics. Plog (1983:120) notes that stylistic variation should not be seen as a bounded entity, but a fluid ways of making pottery in the past (Plog 1983:129). Also, stylistic variation needs to be studied in the place the ceramics were consumed and produced (Plog 1983:133). This view is different from the earlier typologies because it asks the reason behind certain stylistic variation choices. Tied to this is the examination of ceramic style as a way to exchange information and communicate

between groups (Hegmon 1992:519). Before, style was seen as a passive phenomena instead of an active agent. According to Hegmon (1992:521), the information-exchange theory notes that not all material variation is style, but style is a part of variation that conveys a form of information. On the other hand, Hantman and Plog (1982:238) note that ceramics cannot always indicate the range of interaction between groups. Ceramics are able to show through temper what people thought was important for making ceramics, but not necessarily the degree of interaction (Hantman and Plog 1982:218). In contrast, Hegmon (1992:525) states that by looking at the history of a culture, one can help understand the interaction between groups of people. That is, the degree of interaction that can be identified from ceramics may vary. Lastly, it is important to note that ceramics are seen as having a function, even if one cannot always know the degree of interaction (Hegmon 1992:529).

Sackett (1977) bridges some of these ideas by focusing at isochrestic variation. This type of variation goes beyond the material culture and looks at raw material, technology of the vessel, and shape (Hegmon 1992:529) thereby considering both style and function. When looking at ceramics, it is important to record and analyze multiple attributes to indicate the degree of interaction between groups throughout the archaeological record.

Examining ceramics is an important way to identify the degree of interaction at Carter Robinson. There have been few excavations in this area, but there is more information on surrounding groups in the Mississippian world and Virginia Radford culture. The Mississippian culture ceramics are shell-tempered, plain ceramic wares, and vessel forms include bowls with handles (Griffin 1952:226). In contrast, Radford culture ceramics are limestone-tempered, cord marked and plain wares, and the vessel forms were limited to storage and cooking vessels (Egloff 1987; Meyers 2017). Their presence spanned the entire Mississippian period with few

notable changes. This thesis will use these standard typologies, but will also record other attributes to identify interaction at this frontier.

Conclusion

Mississippian political organization was composed of chiefdoms with a range of hierarchical forms (Anderson 1994:9). Frontiers are important because they can show different forms of interaction between hierarchical and non-hierarchical groups (King and Meyers 2002:115). Ceramics are found in households, and variation in ceramics in households can indicate interaction or differences in status across the site (Meyers 2017:3-4). Looking at the ceramics in different parts of the Southeast, one can identify a degree of interaction through temper and surface decoration (Meyers 2002:180). Evidence from the frontier Carter Robinson site (44LE10), shows that a Mississippian group settled this frontier during the thirteenth century and, over time, increasingly interacted with Radford groups already there (Meyers 2017:10).

CHAPTER III: FIELD METHODS AND RESULTS

This chapter presents an overview of fields methods and field results. All of the test units were recorded in relation to the site datum located in the center of the mound. Field methods include a general overview of the methods used in shovel-test and test-unit excavation. Also included in this section is a description of lab methods. This chapter present a brief overview of past investigations at the site, and then present results of field methodology used in 2015 at Structure 6. The field results shown includes the number and location of test units, soil type and artifact counts per test unit, feature location, type and excavation, and a brief overview of all recovered artifacts.

Field Methods

Field methods included geophysical testing, shovel testing, and test unit excavation. Geophysical testing was done in 2007 and again in 2013. This included the use of an EM38A earthen conductivity meter in 2007 and a FM 256 fluxgate gradiometer in 2013 (Wesson and Lennon 2013).

Shovel tests were spaced at 10-meter intervals across the site and were screened through quarter-inch mesh hardware cloth. In 2007 and 2008, the shovel test-pits were set on arbitrary transect lines labeled A-L that were set up across the site on a west-to-east trajectory, starting

west of the mound along the southern treeline and proceeding east and north to the property line. Shovel test transect limits on the south were arbitrarily placed approximately 50 m south of the mound, and to the north were arbitrarily placed approximately 60 m north of the mound. In 2013, additional shovel tests of the southern field were done, and these transects were labeled with the letter of the transect and the year followed by the number (e.g. A13-1, B13-2). Like the earlier shovel tests, these transects were placed on the western edge of the field and proceeded east. The shovel test pits were about 30 cm in diameter and excavated in natural levels to know the stratigraphy of the site (Meyers 2011:139) (see Figure 1). Shovel tests descriptions of soil texture and color followed standard terminology and the Munsell (1993) soil charts.

Test units generally measured 1-x-1-meter in size and levels were excavated both stratigraphically and arbitrarily. Stratigraphic levels were used in areas where the stratigraphy was known and arbitrary levels were used in areas where the stratigraphy was unknown. Both of these methods were used together in some test units (Meyers 2011:139). In many test units, the plowzone was removed as one stratigraphic level and then in 10-centimeter arbitrary levels until reaching subsoil. Each of the levels were screened through quarter-inch mesh hardware cloth, and artifacts were bagged by each level. All test units were photographed in the profile and/or plan view during and after excavation. Lastly, the southwest corner of every test unit was recorded using a total station.

Laboratory Methods

Laboratory analysis provided the foundation for evaluating site chronology and function. All artifacts were bagged and washed according to the provenience assigned in the field.

Provenience was maintained throughout the process by paper and later electronic or digital catalog. The artifacts were sorted by material: animal, bone, shell, botanical, daub, ceramic, and lithic. Analysis included counting and/or weighing each class of material.

The ceramic analysis was initially done during the analysis of all the artifacts. This included recording the temper, surface decoration and vessel fragments type (e.g. body, rim, handle, or appendage) of each sherd. A total of 1,159 sherds were recovered from Structure 6. Additional specialized rim analysis was done on a total of 47 rims. Methods for rim analysis are detailed in Appendix A.

Past Investigations at Site 44LE10

Excavations at the site have been conducted over six field seasons (2006, 2007, 2008, 2013, 2015 and 2017). Each of the excavations identified structures and building phases at the site. These include four houses and a craft production area for shell beads (Meyers 2017:6). Geophysical testing and a systematic shovel-test survey identified the locations of multiple structures and site limits. Test units and block excavations were used to excavate structures and determine site chronology.

Initial geophysical testing involved the placement of nine, 20-x-20-m grids across the site. These tests identified possible structures in all of the grids (Meyers 2011:136). Additional geophysical testing in 2013 identified more structures at the site (Wesson and Lennen 2013). Shovel testing of the site was done at a 10-m interval in 2007, 2008, and 2013. These tests further delineated the structure locations and identified areas of interest for excavations; they also identified site limits.

Based on the 2007 geophysical survey, multiple test units (usually expanded into block excavations) were placed north and east of the mound. In addition, two 1-x-2-m test units were placed on the south and west mound flanks. Block 1 was located north of the mound and contained evidence of Structures 1 and 4 (Figure 2). Structure 1 is a possible house structure that is located close to the mound. This structure lacked a hearth; its posthole pattern suggested it was rectangular in shape, with an open side facing the plaza area in front (east) of the mound (Meyers 2015:232). The artifacts found in this structure were mostly shell beads, ceramics, animal bones, and lithics (Meyers 2015:231). Structure 4 was built either right on top of a portion of Structure 1 or very close (Meyers 2011:193). This structure resembles a typical Mississippian house with four interior posts and a central hearth (Meyers 2011:220). In 2013, a Block 1 extension was excavated on the northwest edge of the block. A shell bead production area was identified here (Meyers 2015:231).

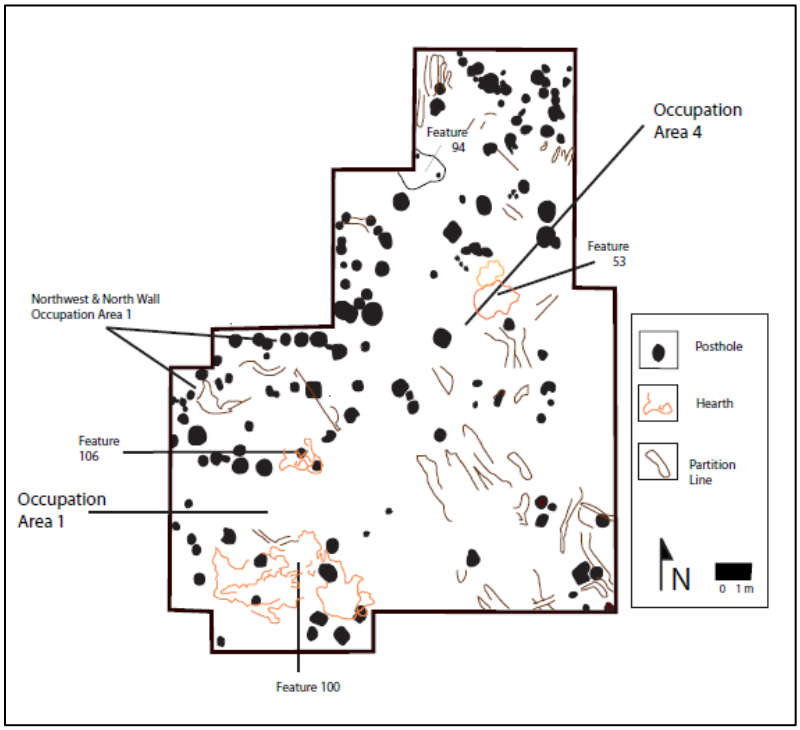

Figure 2. Plan view of Block 1, Structures 1 and 4 (Meyers 2011:194).

Block 2 contained remains of Structure 3, located east of Block 1 (Figure 3). This was a wall-trench structure, an earlier style than Structures 1 and 4 (Meyers 2011:187). Also, this structure did not contain many artifacts. It is suggested that the structure was swept clean and abandoned after a short period of occupation (Meyers 2011:191).

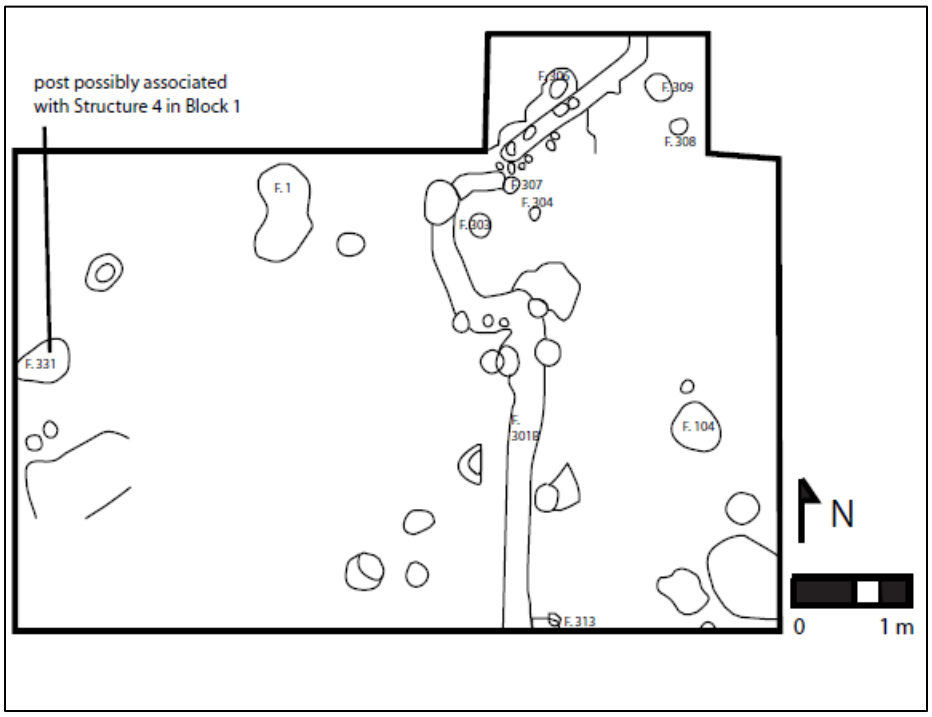

Figure 3. Plan view of Block 2, Structure 3 (Meyers 2011:176).

Block 3 was located about 80 m east of the mound and contained remains of Structure 2 (Figure 4). This block contains evidence of three building stages (Meyers 2011:248). The excavations on the mound flanks identified two stages of mound construction (Meyers 2008:36). In one test unit on the southern side of the mound, remains of a structure, Structure 5, were uncovered (Meyers 2008:37).

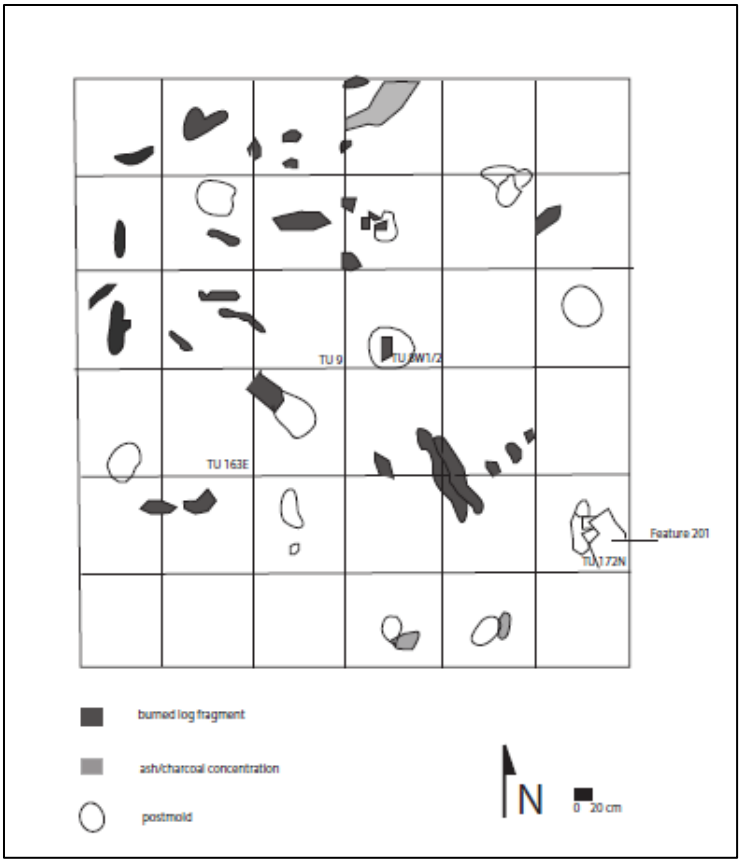

Figure 4. Plan view of Block 3, Structure 2 (Meyers 2011:239).

Six radiocarbon dates were used to establish site, and specifically, structure occupation (Table 1) (Meyers 2011:254). Carbon samples were obtained from Structures 1 and 2 and from different depths in the mound test units. These show that the occupation of the site was from approximately A.D. 1250-1440. Structure 3 was built first, along with the earliest stage of Structure 2, at the beginning of site settlement. Structures 1, 4, and the middle stage of Structure 3 were contemporaneous with the building of the mound. A second mound level was built during the final part of site occupation. The last occupations of Structures 1, 2, and possibly Structure 4 also occurred at this time.

Table 1. Radiocarbon Dates from Carter Robinson (Meyers 2011:254).					
Sample Number	**Sample Type**	**Site Area**	**BP Age**	**2 sigma range**	**1 sigma range**
AA80784	Wood charcoal	Structure Area 1	641+/-38	1279-1404	1288-1320
AA80785	Wood charcoal	Structure Area 2	512+/-37	1325-1345	1408-1436
AA80786	Wood charcoal	Structure Area 2	533+/-37	1316-1355	1400-1429
AA80787	Wood charcoal	Mound-east side	638+/-36	1282-1407	1293-1325
AA80788	Wood charcoal	Mound-east side	722+/-36	1254-1299	1268-1287
AA80789	Wood charcoal	Mound-south side	649+/-36	1278-1400	1287-1315

Results of 2015 Investigations

In 2013, a total of 84 shovel tests were placed in a field south of the mound. Of these, 71 were positive for artifacts (Figure 5). Overall, the shovel tests results showed two artifact clusters in this southern field. One was located 45-m south of the mound and contained a high concentration (n=50 or more) of artifacts, mostly ceramics and lithics, recovered from a depth of between 0-80 centimeters below surface (cmbs). The second area of concentration was located approximately 20 m to the east, which also had a high concentration (n=50 or more), of artifacts, also mostly ceramics and lithics.

Most of the artifacts were found at depths between 41-80 cmbs. A fair amount (n=50 or more) of artifacts were recovered from the shovel-test excavations that suggested craft specialization was occurring in this area. These included chunky stones, nutting stones, and drills. Most of these were recovered near the artifact clusters (Figure 6).

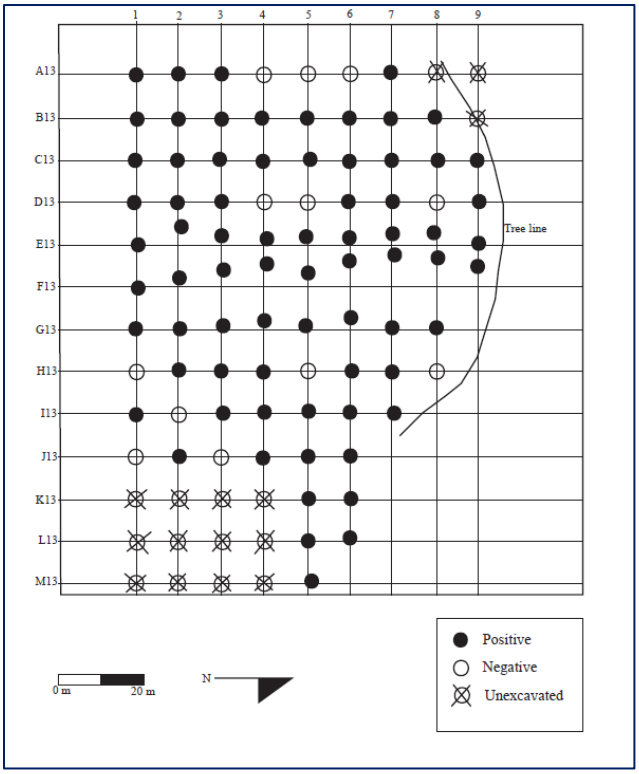

Figure 5. Plan view of 2013 Shovel Tests.

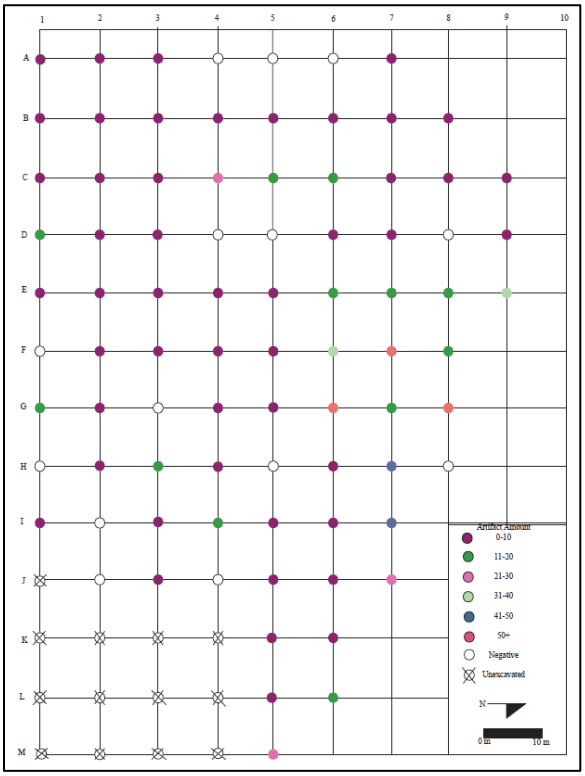

Figure 6. Plan view of 2013 Shovel Tests Artifact Density.

Test Unit N908 E970 was placed in one of the areas of concentration and was excavated in four arbitrary 10-centimeter levels. At an approximate depth of 40 cmbs, an intact floor area, distinguished by the presence of ash and clay, was identified. Once the living surface had been identified, test units were placed adjacent to this one to identify any evidence of structure. Ultimately, a 6-x-6-m block, labeled Block 4 (Figures 7 and 8) was opened. Each test unit within this block is described in detail below, along with descriptions of features identified in the test units.

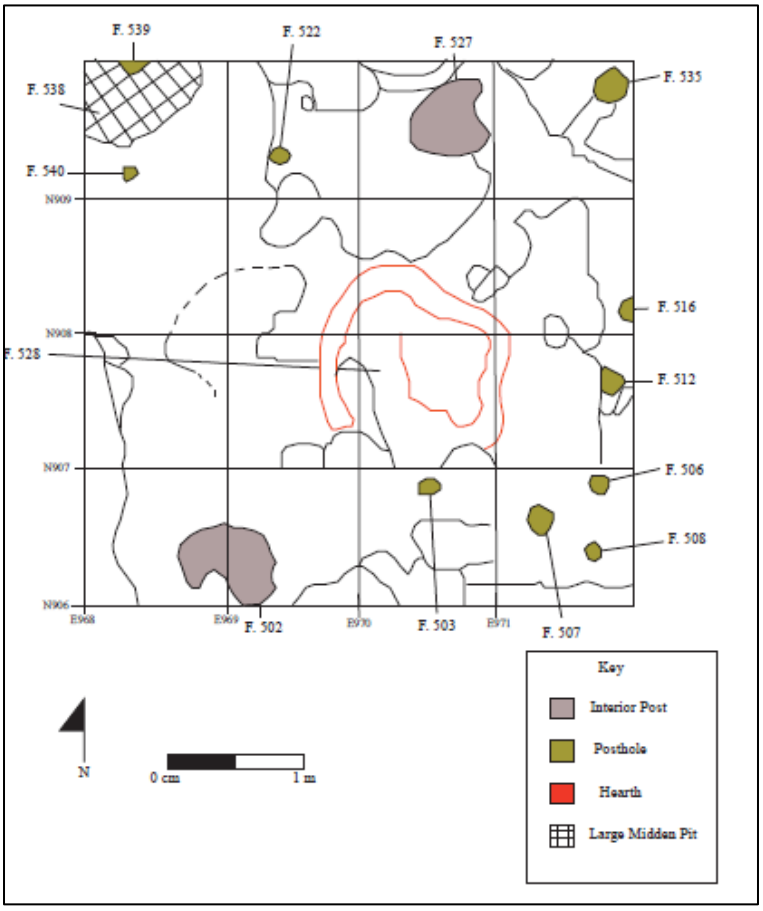

Figure 7. Plan view of Block 4, Structure 6.

Figure 8. Plan view of Block 4, Structure 6 (40 cmbs).

Test Unit Excavation

The following section details each test unit excavation results, including the location, the soil types, and features if they were present. Also, it includes number of artifacts that were found within each test unit.

Test Unit N906/E968

Test Unit N906 E968 was located 82 m south of the datum in an area where shovel tests showed a high concentration of artifacts. This test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (10YR2/2) silty loam. At a depth of 36 cmbs, soil changed to a dark brown (10YR3/3) loamy silt. One feature was identified in the unit, Feature 502. A total of 179 artifacts were recovered from this test unit.

Feature 502 is an interior post located in the southeastern part of the unit. It was located at a depth of approximately 40 cmbs. The feature was mapped (Figure 9) and photographed (Figure 10). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 11). It was 60-cm wide and extended to a depth of 25 cm. Soil in the feature was a dark yellowish brown (10YR4/6) loamy clay. A total of 57 artifacts were recovered from the feature and include botanical, daub, ceramics, lithics, fire-cracked rock (FCR), and shale fragments. A 10 liter (L) sample of soil was removed from the feature for water screening/flotation.

Test Unit N906/E969

Test Unit N906 E969 was placed adjacent to Test Unit N906 E969 to identify more structural remains. This test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (10YR2/2) silty clay loam. At a depth of 40 cmbs, soil changed to a brown silty (7.5YR4/4) clay loam. The western portion of Feature 502, described above, was identified in this test unit (Figure 12).

Test Unit N906/E970

Test Unit N906 E970 was placed adjacent to Test Unit N906 E970 to identify a posthole pattern. The test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (10YR2/2) silty clay loam. At a depth of approximately 30 cmbs, soil changed to a dark brown (7.5YR4/4) silty clay loam. One feature, 503, was identified in this test unit. A total of 299 artifacts were recovered from this test unit.

Feature 503 is a posthole located in the northern part of the unit. It was located at a depth of 33 cmbs. The feature was mapped and photographed (Figure 13). The southern half of the

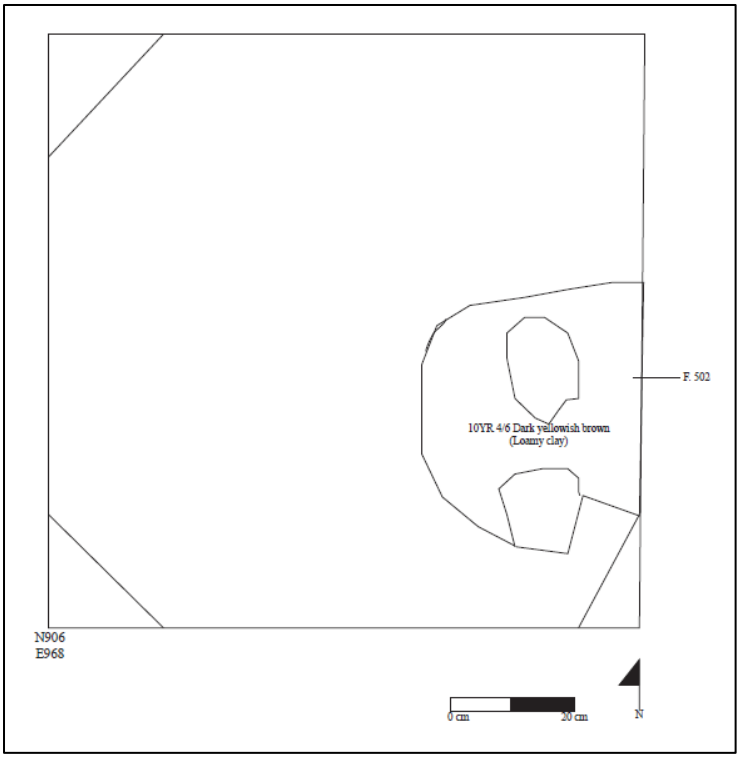

Figure 9. Plan view of Test Unit N906/E968 showing Feature 502.

Figure 10. Plan view of Test Unit N906/E968 and N906/E969 showing Feature 502.

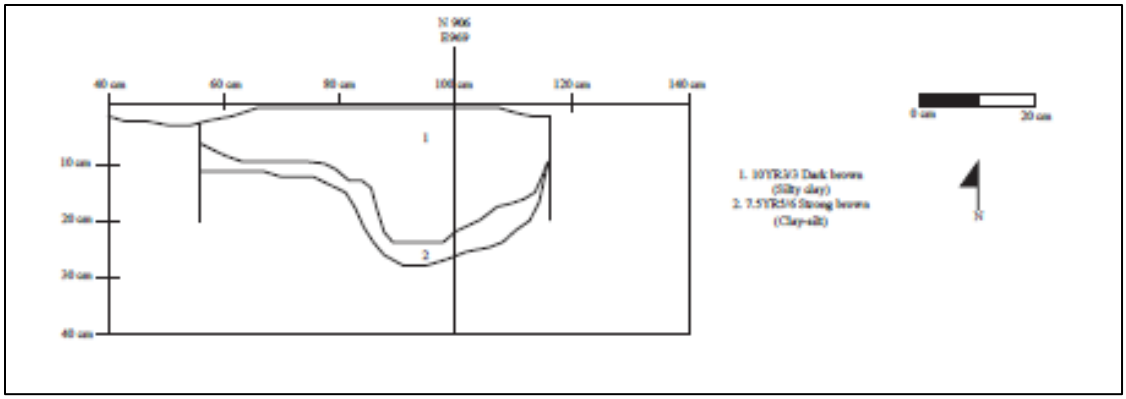

Figure 11. Profile view of Feature 502.

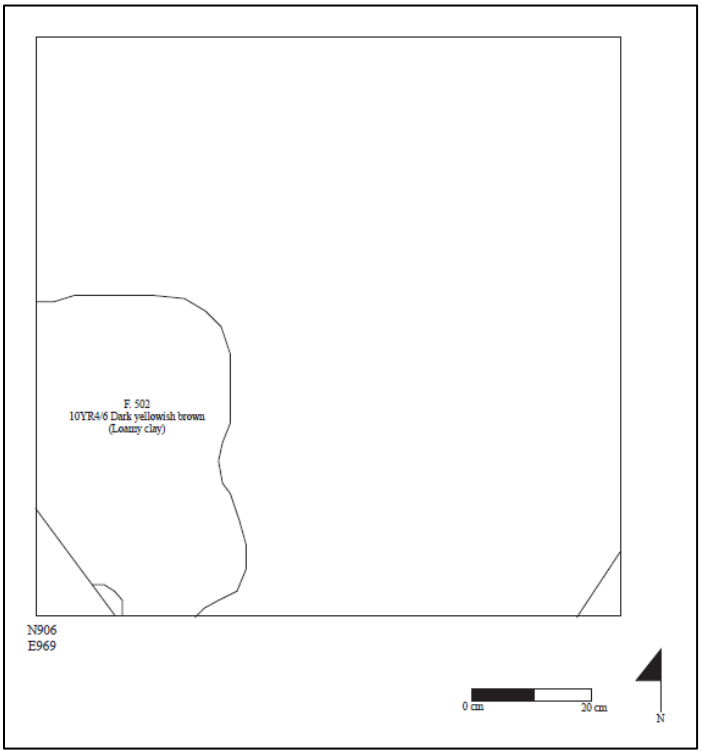

Figure 12. Plan view of in Test Unit N906/E969 showing Feature 502.

feature was bisected and excavated and a profile map was drawn (Figure 14). It was 24-cm wide and extended to a depth of 36 cm. Soil in the feature was a dark yellowish brown (10YR3/4) silty clay loam. A total of 17 artifacts were recovered from the feature. These included botanicals, daub, ceramics, lithics, FCR, and a charcoal sample.

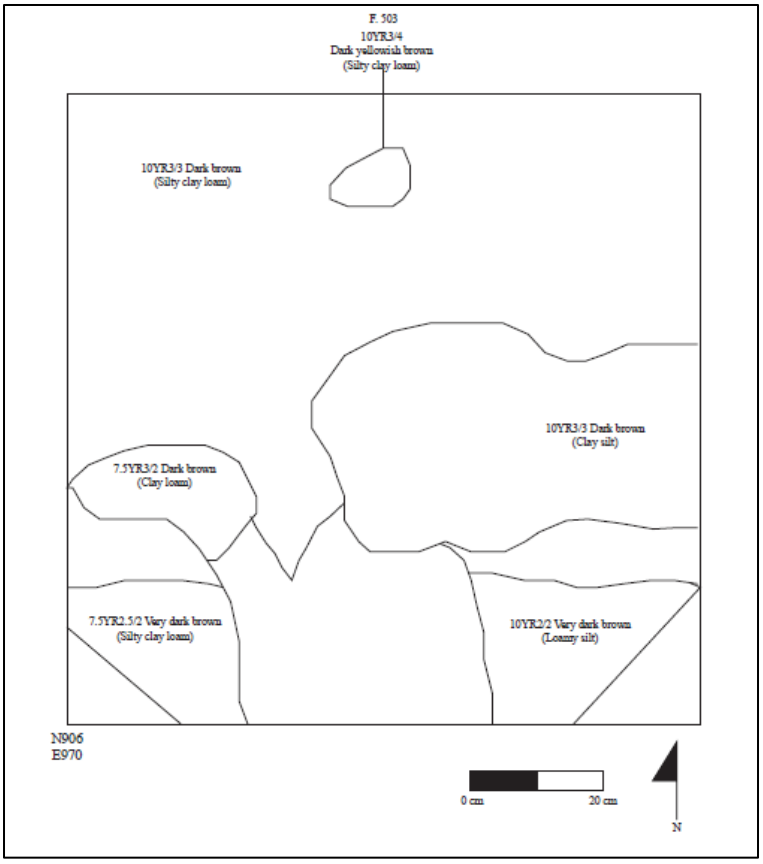

Figure 13. Plan view of Test Unit N906/E970 showing Feature 503.

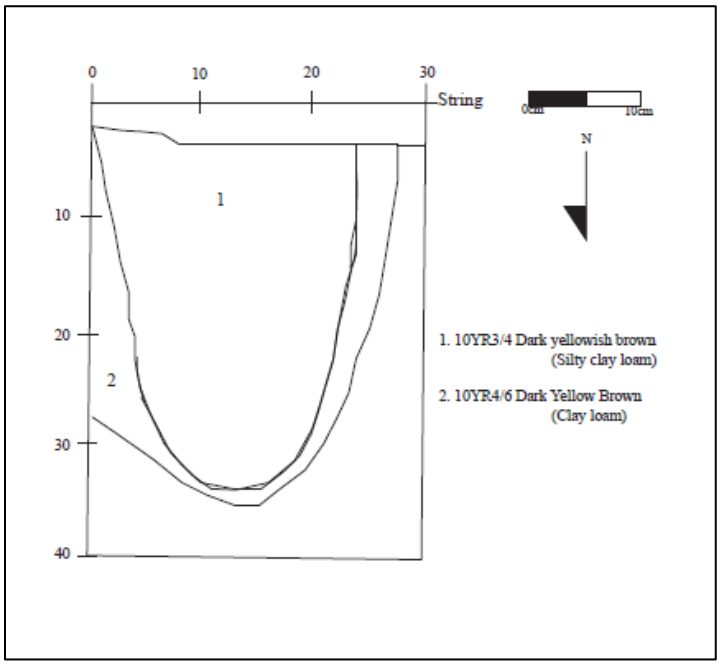

Figure 14. Profile view of Feature 503.

Test Unit N906/E971

Test Unit N906 E971 was placed adjacent to Test Unit N906 E971 to identify a posthole pattern. This test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (10YR2/2) silty clay loam. At a depth of 39 cmbs, soil changed to a dark yellowish (10YR3/6) brown clay silt. Three features were identified in this test unit: Feature 506, 507, and 508. A total of 232 artifacts were recovered from this test unit.

Feature 506 is a posthole located in the northeastern part of the test unit. It was located at a depth of 39 cmbs. The feature was mapped and photographed (Figure 15). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 16). It was 17 cm wide and extended to a depth of 9 cm. Soil in this feature was a very dark greyish brown (10YR3/2) silty clay loam. One sherd was recovered from the feature.

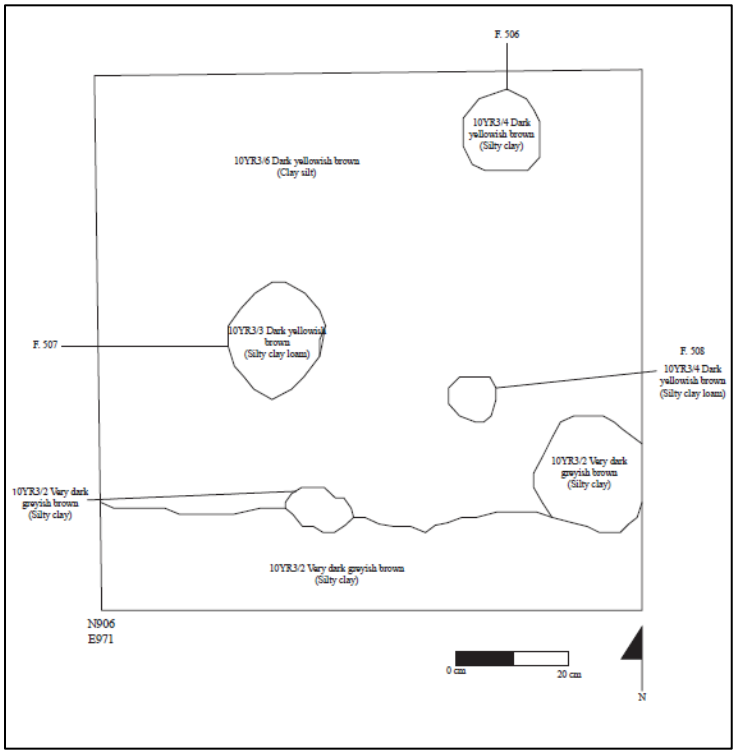

Figure 15. Plan view of Test Unit N906/E971 showing Features 506, 507, and 508.

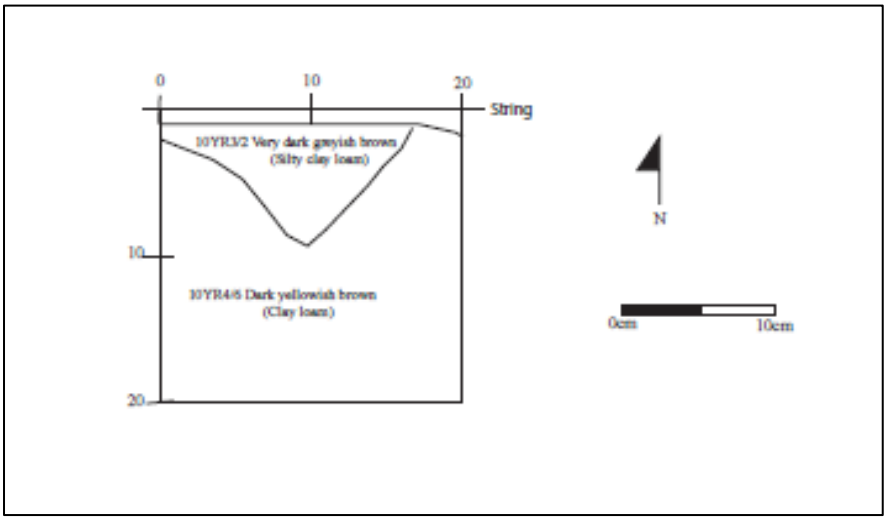

Figure 16. Profile view of Feature 506.

Feature 507 is a posthole located in the western half of the test unit, towards the center. It was located at a depth of 40 cmbs. The feature was mapped and photographed (see Figure 15). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 17). It was 26-cm wide and extended to a depth of 14 cm. Soil in this feature was a very dark brown (7.5YR2.5/2) silty clay. A total of four artifacts were recovered from the feature and included botanicals, daub, ceramic, and lithic remains.

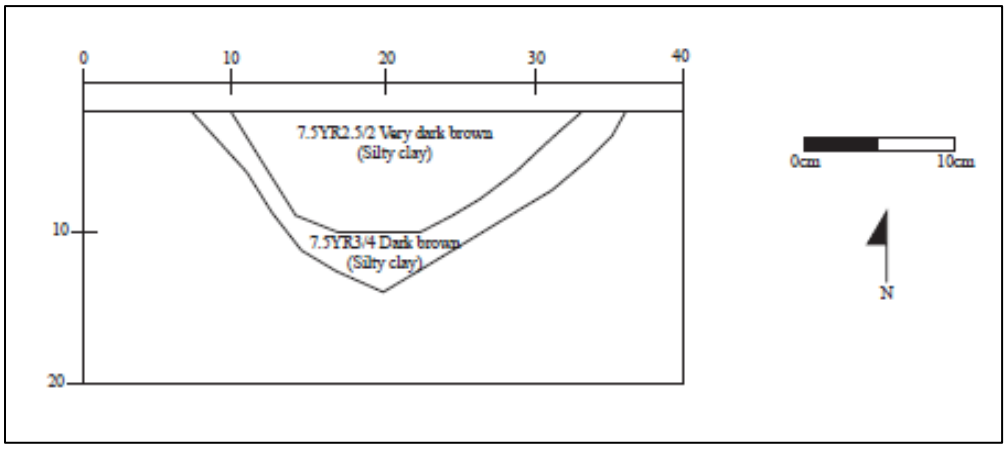

Figure 17. Profile view of Feature 507.

Feature 508 is a posthole located in the eastern half towards the center. It was located at a depth of 40 cmbs. The feature was mapped and photographed (see Figure 15). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 18). It was 20-cm wide and extended to a depth of 56 cm. Soil in this feature was a dark yellowish brown (10YR3/4) silty clay loam. A total of 10 artifacts were recovered from the feature and included botanicals, daub, ceramics, lithics, and a charcoal sample. A 10 l sample of soil was removed from the feature for water screening/flotation.

Test Unit N907/E968

Test Unit N907 E968 was placed adjacent to Test Unit N906 E968 to identify more structural remains or posthole pattern. This test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of 32

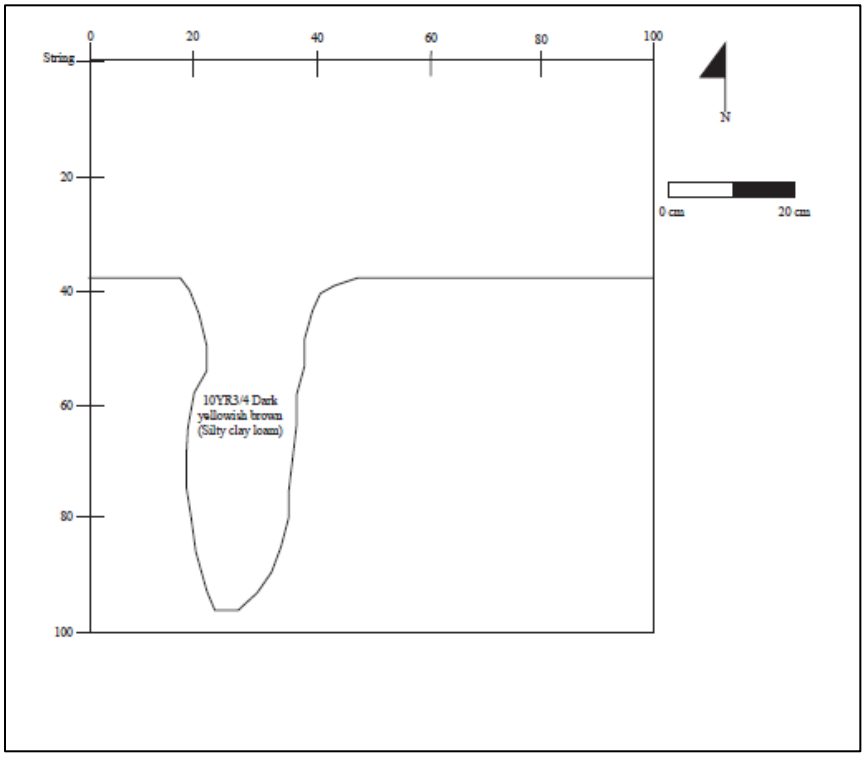

Figure 18. Profile view of Feature 508.

cmbs, soil changed to a brown (10YR4/3) silty loam. Excavation ceased at approximately 32 cmbs. A total of 363 artifacts was recovered from this test unit (Figure 19).

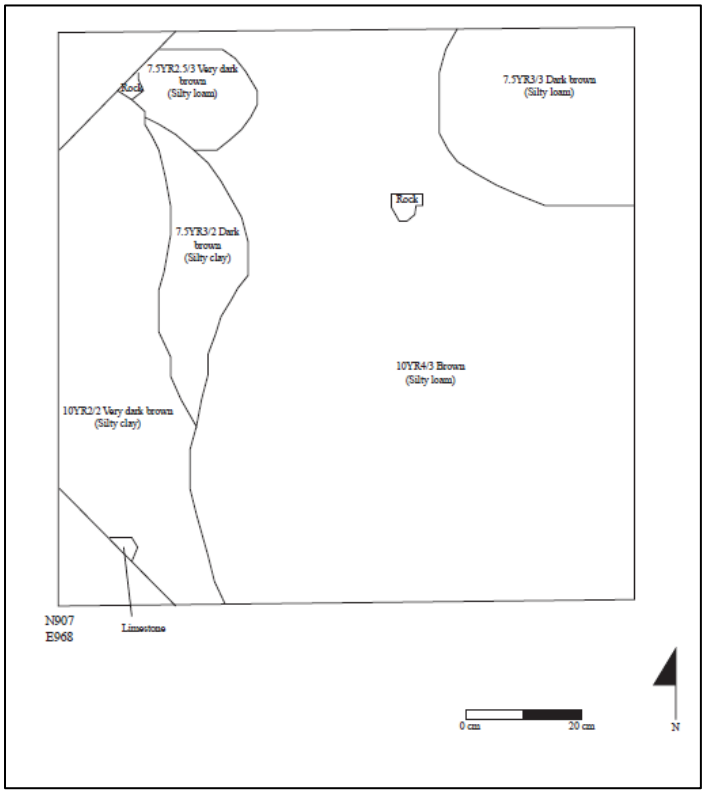

Figure 19. Plan view of Test Unit N907/E968.

Test Unit N907/E969

Test Unit N907 E969 was placed adjacent to Test Unit N907 E968 to identify more structural remains. This test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of 32 cmbs, soil changed to a dark yellowish brown (10YR3/6) mottled with a very dark brown (7.5YR2.5/3). Portion of one feature, a hearth, were identified in the test unit. A total of 263 artifacts was recovered from this test unit.

Feature 528 is a hearth located in the eastern part of Test Unit N907 E969. It was located at a depth of 32 cmbs. The feature was mapped (Figure 20) and photographed (Figure 21). The feature was not bisected. It was 125-cm wide. Soil in the feature was both a dark yellowish brown (10YR3/6) and a very dark brown (7.5YR2.5/3). A total of 31 artifacts was recovered from the feature and included animal bone, botanical, ceramics, lithics, and FCR.

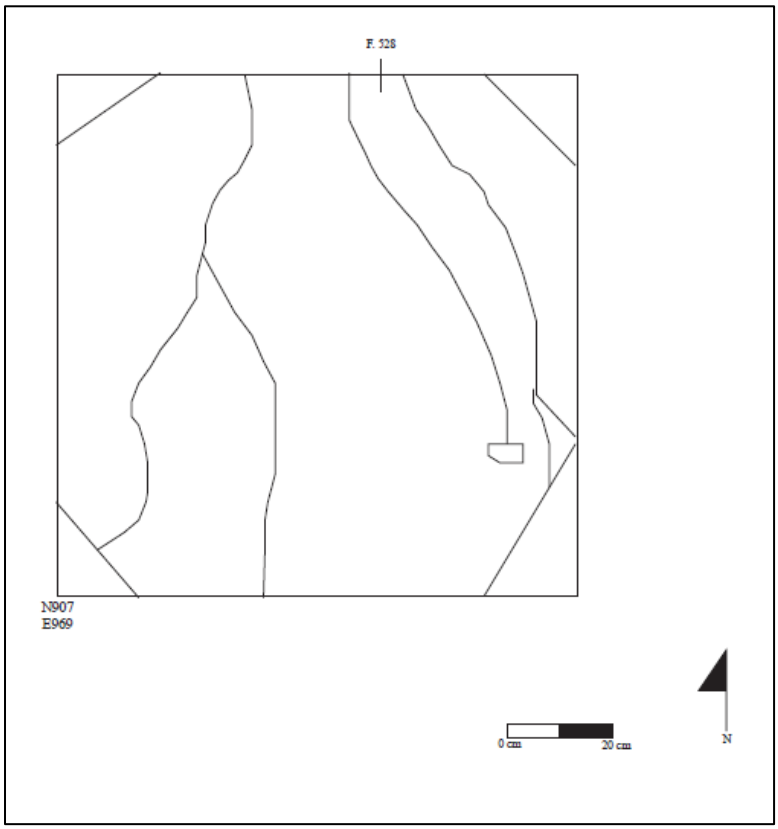

Figure 20. Plan view of Test Unit N907/E969 showing Feature 528.

Test Unit N907/E970

Test Unit N907 E970 was placed adjacent to Test Unit N907 E969 to identify more structural remains. This test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (7.5YR2/2) loamy clay. At a depth of 40 cmbs, soil changed to a brown (7.5YR4/4). One feature was identified in this test unit, Feature 528. Excavation of the unit

Figure 21. Plan view of Feature 528.

continued into Level 5, but for only 6 cm, and then switched to feature excavation because Feature 528 extended into this unit.Excavation ceased at approximately 46 cmbs. A total of 284 artifacts were recovered from this test unit. Feature 528, described above, was partially located in this test unit (Figure 22).

Test Unit N907/E971

Test Unit N907 E971 was placed adjacent to Test Unit N907 E970 to identify a posthole pattern. The test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a brown (7.5YR4/4) loamy clay. At a depth of 40 cmbs, soil changed to a dark brown (7.5YR3/3) silty clay loam. One feature, Feature 512, was identified in this test unit. A total 394 artifacts was recovered from this unit.

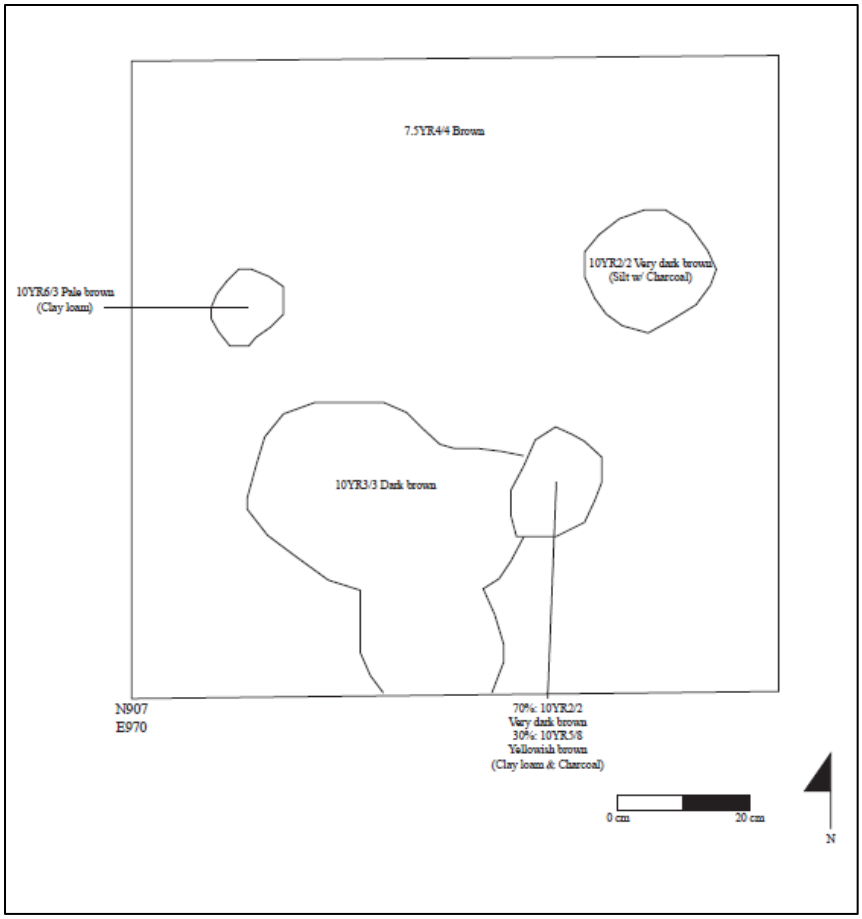

Figure 22. Plan view of Test Unit N907/E970 showing Feature 528.

Feature 512 is a posthole located in the northeastern part of the test unit. It was located at a depth of approximately 40 cmbs. The feature was mapped and photographed (Figure 23). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 24). It was 13-cm wide and extended to a depth of 28 cm. Soil in the feature was a very dark loamy clay (7.5YR2.5/2). A total of 13 artifacts was recovered from the feature. They included animal bone, botanical remains, ceramics, and lithics.

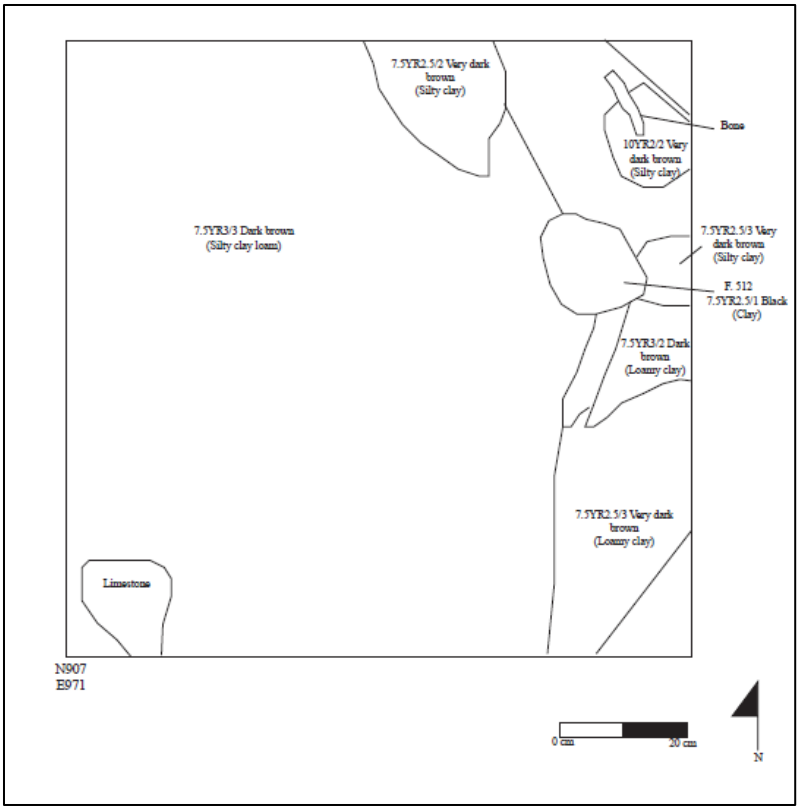

Figure 23. Plan view of Test Unit N907/E971 showing Feature 512.

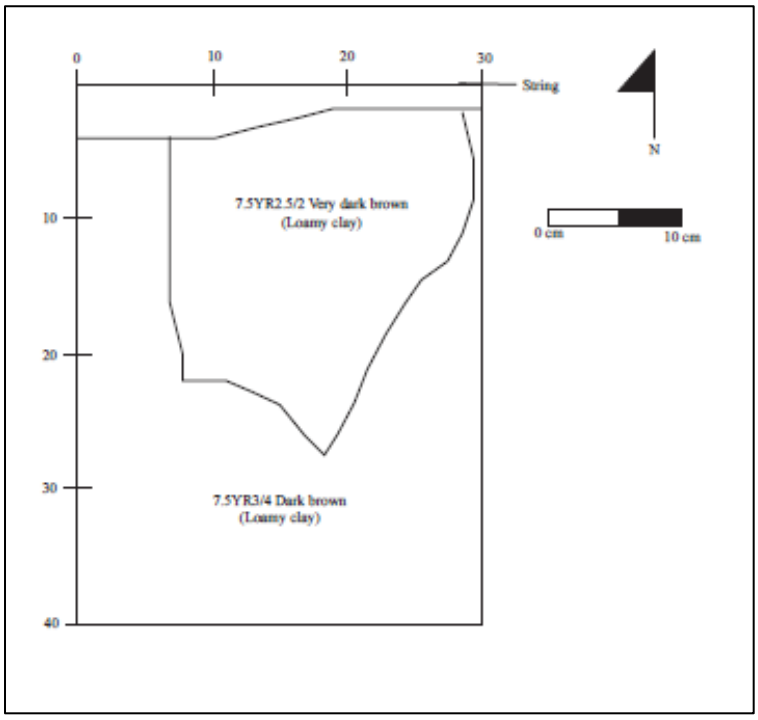

Figure 24. Profile view of Feature 512.

Test Unit N908/E968

Test Unit N908 E968 was placed adjacent to Test Unit N907 E968 to identify more structural remains/identify a posthole pattern. The test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of approximately 40 cmbs the soil did not change, but this could possibly have been a portion of the midden. There were no features found in the unit. A total of 195 artifacts was recovered from this test unit (Figure 25).

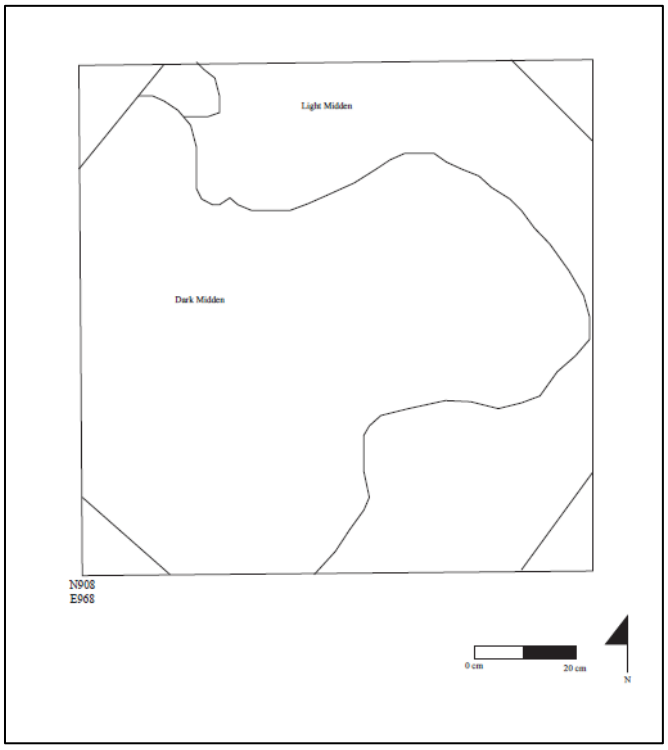

Figure 25. Plan view of Test Unit N908/E968.

Test Unit N908/E969

Test Unit N908 E969 was placed adjacent to Test Unit N908 E968 to identify more structural remains/identify a posthole pattern. This test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of

33 cmbs, soil changed to a dark yellowish brown (10YR3/4). This test unit contained part of Feature 528, the hearth described above. Excavation ceased at approximately 33 cmbs. A total of 271 artifacts were recovered from this test unit (Figure 26).

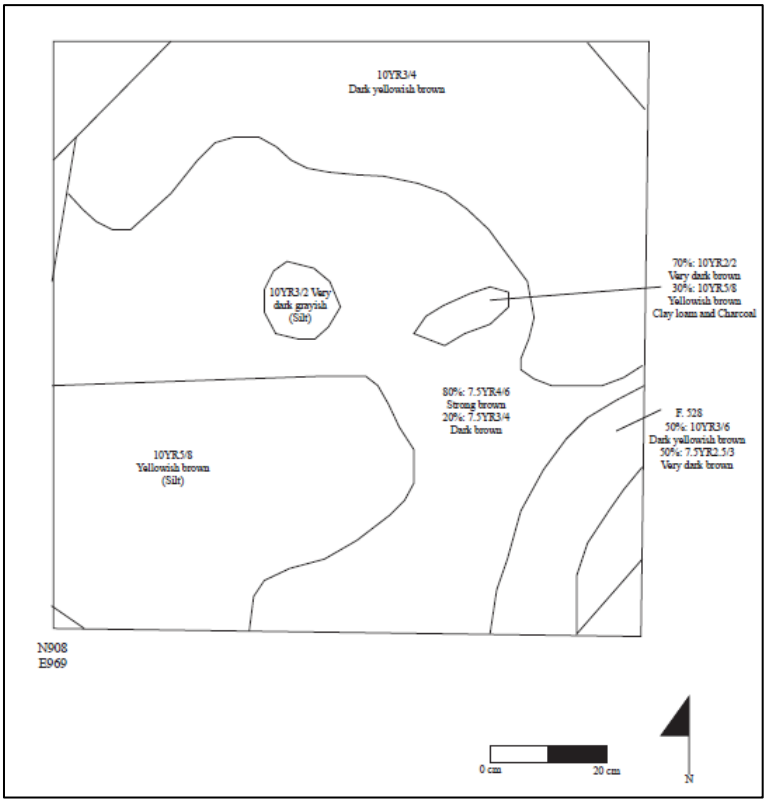

Figure 26. Plan view of Test Unit N908/E969 showing Feature 528.

Test Unit N908/E970

Test Unit N908 E970 was placed adjacent to Test Unit N908 E969 to identify more structural remains. This test unit was excavated by shovel in four arbitrary, 10-cm levels, which consisted of plowzone. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of 40 cmbs, soil changed to both a dark yellowish brown (10YR3/6) loamy clay and a very dark brown (7.5YR2.5/3) loamy clay. This test unit contained part of Feature 528, the hearth

described above. Excavation ceased at approximately 40 cmbs. A total of 902 artifacts was recovered from this test unit (Figure 27).

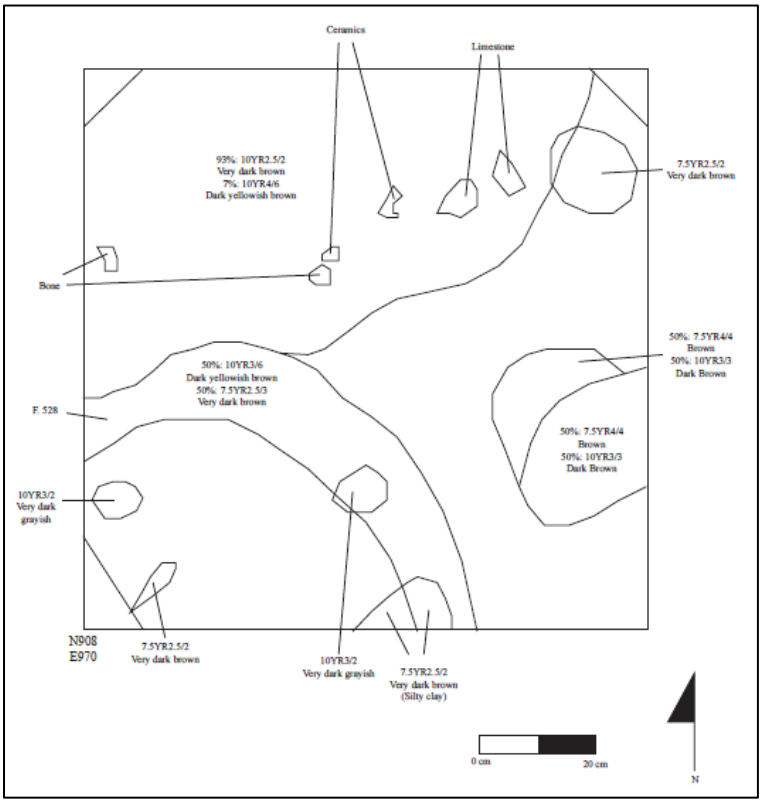

Figure 27. Plan view of Test Unit N908/E970 showing Feature 528.

Test Unit N908/E971

Test Unit N908 E971 was placed adjacent to Test Unit N908 E970 to identify a posthole pattern. This test unit was excavated by shovel in four arbitrary 10-cm levels, which consisted of plowzone. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of 40 cmbs, soil changed to a dark brown (10YR3/3) loamy clay. One feature, Feature 516, was identified in this test unit. A total of 392 artifacts was recovered from this test unit.

Feature 516 is a posthole located in the southeastern corner of the test unit. It was located at a depth of 42 cmbs. The feature was mapped and photographed (Figure 28). The southern half

of the feature was bisected and excavated and a profile map was drawn (Figure 29). It was 6-cm wide and extended to a depth of 54 cm. Soil in this feature was a strong brown (7.5YR3/3) clay loam. A total of three artifacts was recovered from the feature and included a flake and two pottery sherds.

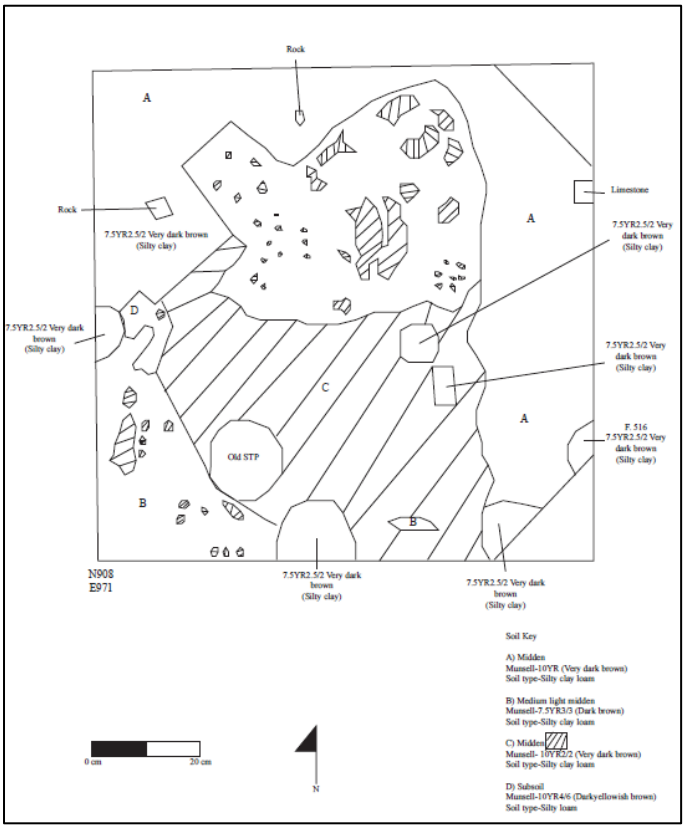

Figure 28. Plan view of Test Unit N908/E971 showing Feature 516.

Test Unit N909/E968

Test Unit N909 E968 was placed adjacent to Test Unit N908 E968 to identify additional structural remains. This test unit was excavated by shovel in one 40-cm level, which consisted of plowzone. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of 40 cmbs (Midden Level 1), soil changed to a very dark brown (7.5YR2.5/3) clayey silt, dark reddish

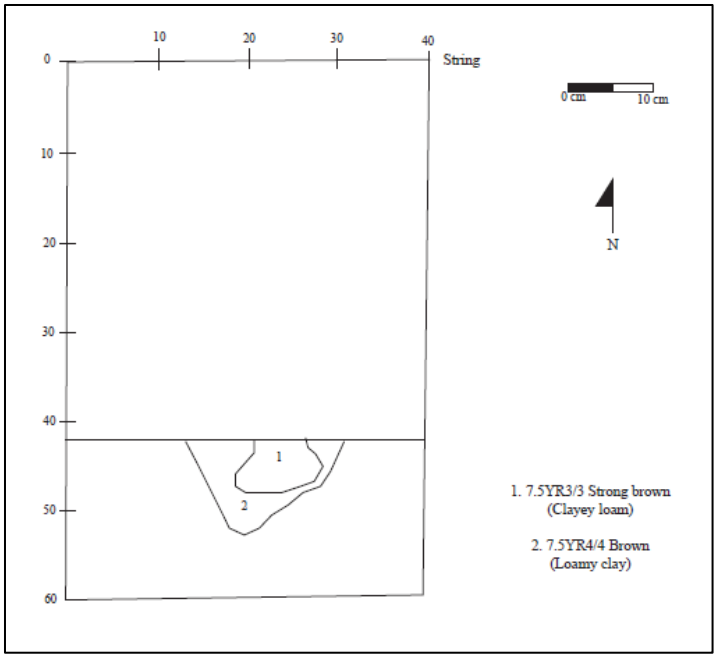

Figure 29. Profile view of Feature 516.

brown (5YR2.5/2) silty clay, and dark brown (7.5YR3/2) clay silt. Three features were recovered from the test unit; Features 538, 539, and 540.

Feature 538 is a large midden-filled pit located in the southern half of the test unit. It was located at a depth of 57 cmbs. The feature was mapped (Figure 30) and photographed (Figure 31). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 32). It was 83-cm wide and extended to a depth of 12 cm. Soil in this feature was a dark brown (7.5YR3/3) loamy clay. A total of 82 artifacts was recovered from the feature and included animal bone, botanical, daub, ceramics, and lithics.

Feature 539 is a posthole located in the southern portion within the large midden-filled pit. It was located at a depth of 70 cmbs. The feature was mapped (see Figure 30) and photographed (see Figure 31). The southern half of the feature was bisected and excavated, but no profile map was drawn. It was 23-cm wide and extended to a depth of 27 cm. Soil in this

feature was a very dark brown (7.5YR2.5/2) clayey loam. A total of four artifacts was recovered from the feature and included botanical remains, ceramics, and lithics.

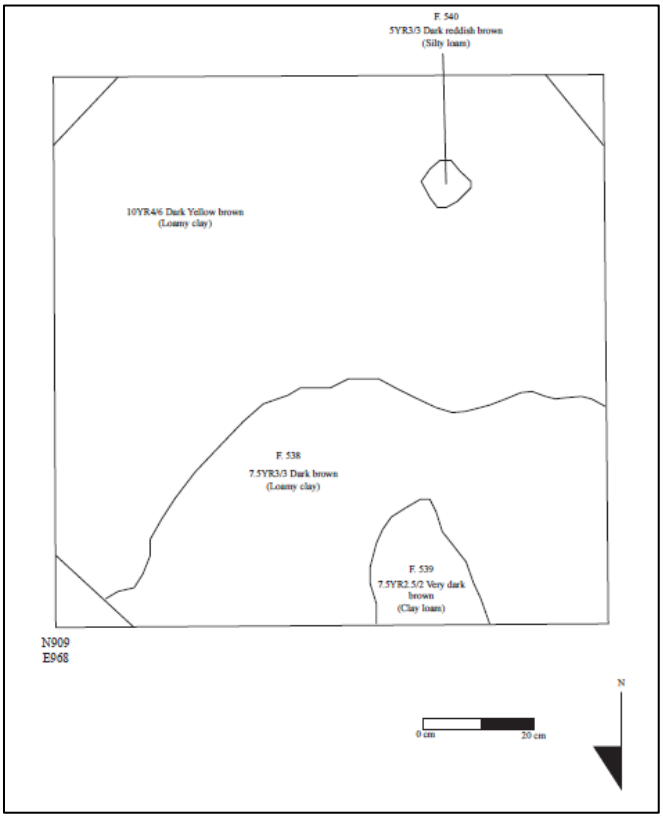

Figure 30. Plan view of Test Unit N909/E968 showing Features 538, 539 and 540.

Figure 31. Photograph of Test Unit N909/E968 showing Features 538, 539 and 540.

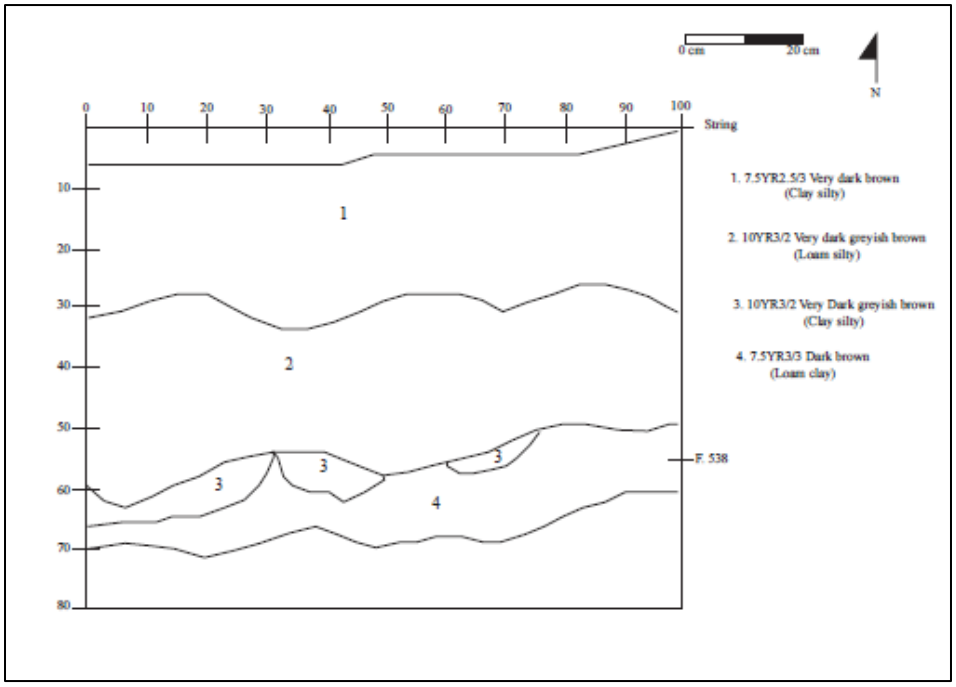

Figure 32. Profile view of Feature 538.

Feature 540 is a posthole located in the northeastern half of the test unit. It was located at a depth of 62 cmbs. The feature was mapped (see Figure 30) and photographed (see Figure 31). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 33). It was 13-cm wide and extended to a depth of 32 cm. Soil in this feature was a dark red brown (5YR3/3) silty loam. A total of seven artifacts was recovered from the feature and included animal bone, shell, ceramics, lithics, and shale fragments.

Test Unit N909/E969

Test Unit N909 E969 was placed adjacent to Test Unit N909 E968 to identify a posthole pattern. This test unit was excavated by shovel in one 40-cm plowzone level. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of 40 cmbs (Midden Level 1), soil changed

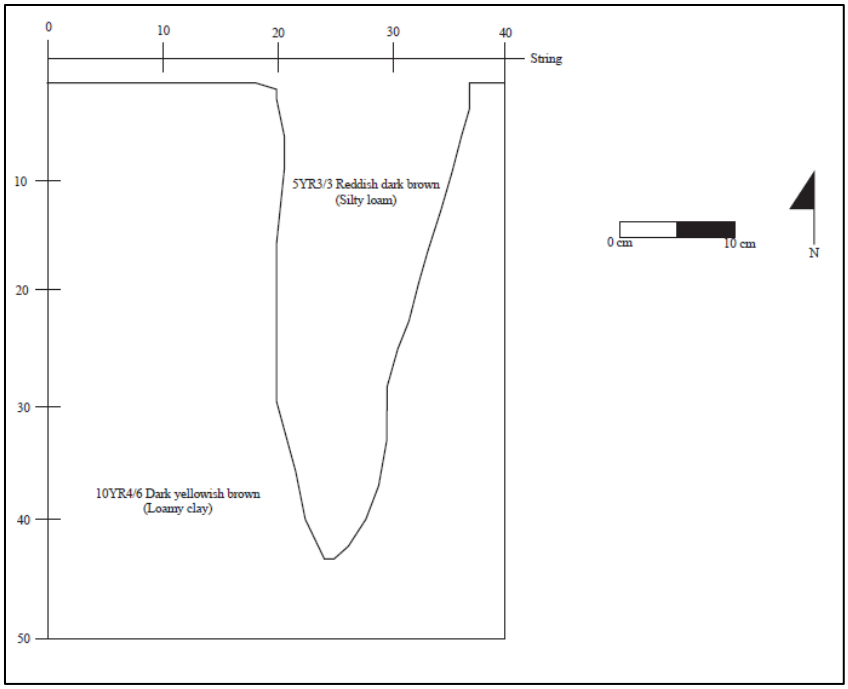

Figure 33. Profile View of Feature 540.

to a very dark brown (7.5YR2.5/2) loamy clay. One feature, 522, was identified in this test unit. In addition, portions of Feature 540 extended into this test unit. Excavation of the unit continued into the second level of the midden (approximately 20 cmbs). Soil in this second level was dark yellowish brown (10YR4/6) loamy clay. Excavation ceased at approximately 60 cmbs. A total of 336 artifacts was recovered from this test unit.

Feature 522 is a posthole located in the north central portion of the test unit. It was located at a depth of 55 cmbs. The feature was mapped and photographed (Figure 34). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 35). It was 12 cm wide and extended to a depth of 45 cm. Soil in this feature was a dark brown (7.5YR3/3) clay loam. A total of 22 artifacts was recovered from the feature and included animal bone, shell, botanicals, daub, ceramics, and lithics.

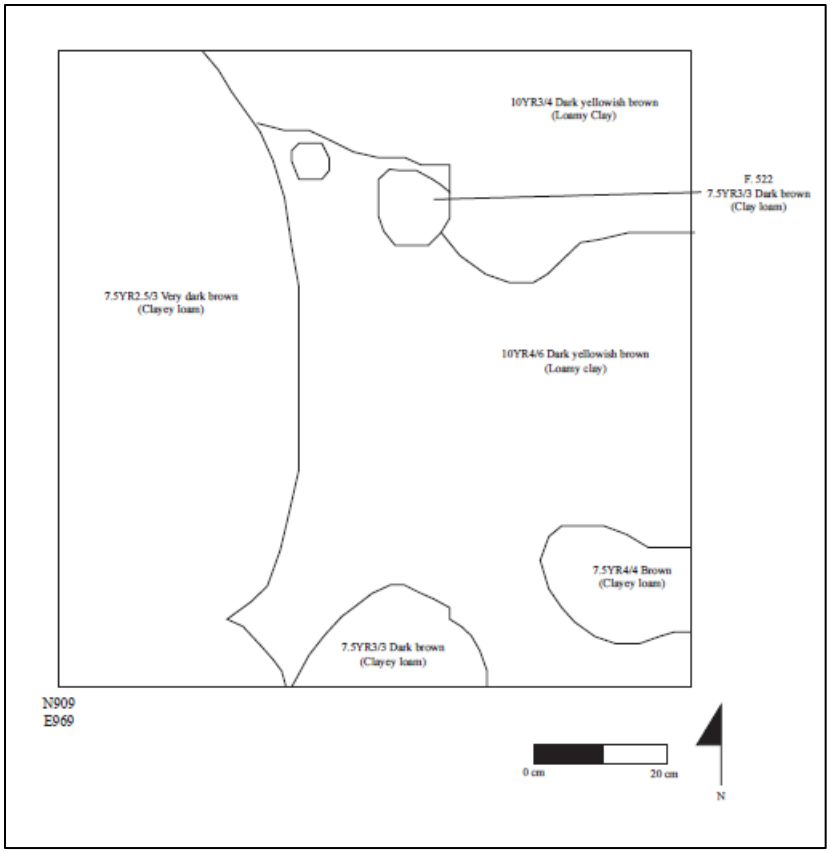

Figure 34. Plan view of Test Unit N909/E969 showing Feature 522.

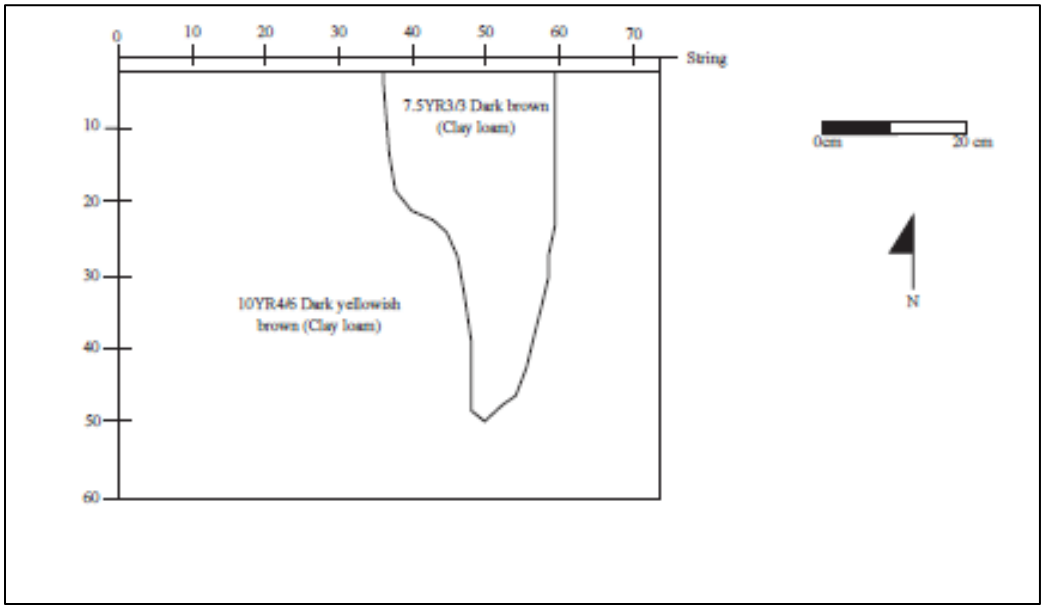

Figure 35. Profile view of Feature 522.

Test Unit N909/E970

Test Unit N909 E970 was placed adjacent to Test Unit N909 E969 to identify more structural remains. This test unit was excavated by shovel in one cultural 40-cm level, which consisted of plowzone. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of 40 cmbs (Midden Level 1), soil changed to a strong brown (7.5YR4/6) silty clay. One feature, 527, was identified in this test unit. A total of 342 artifacts was recovered from this test unit.

Feature 527 is an interior post located in the northeastern side of the unit. It was located at a depth of 50 cmbs. The feature was mapped (Figure 36) and photographed (Figure 37). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 38). It was 65-cm wide and extended to a depth of 41 cm. Soil in this feature was a dark yellowish brown (10YR3/4) loamy clay. A total of 138 artifacts was recovered from the feature and included animal bone, botanical, daub, ceramics, lithics, marl frags, and possible chunky stone.

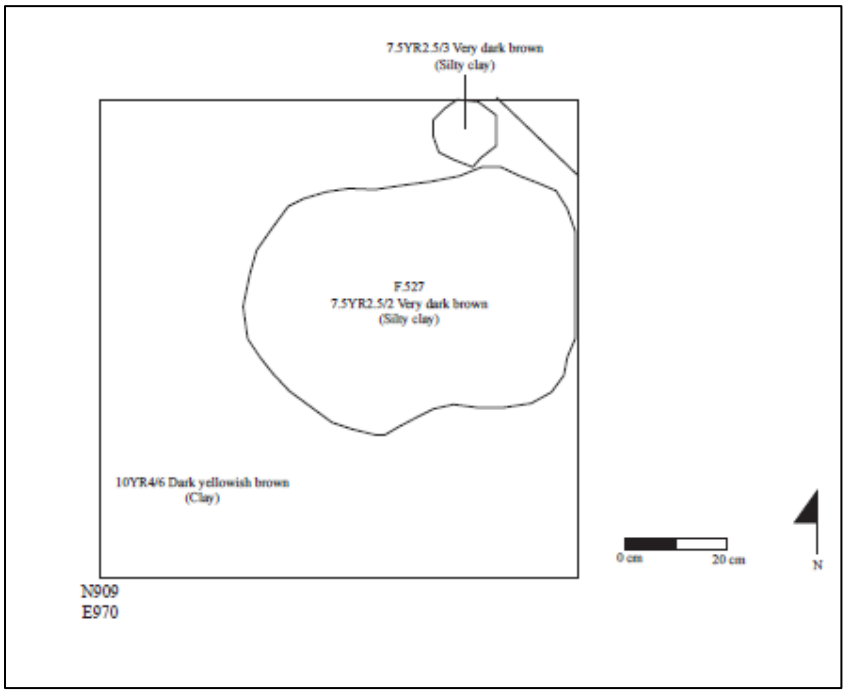

Figure 36. Plan view of Test Unit N909/E970 showing Feature 527.

Figure 37. Plan view of Feature 527.

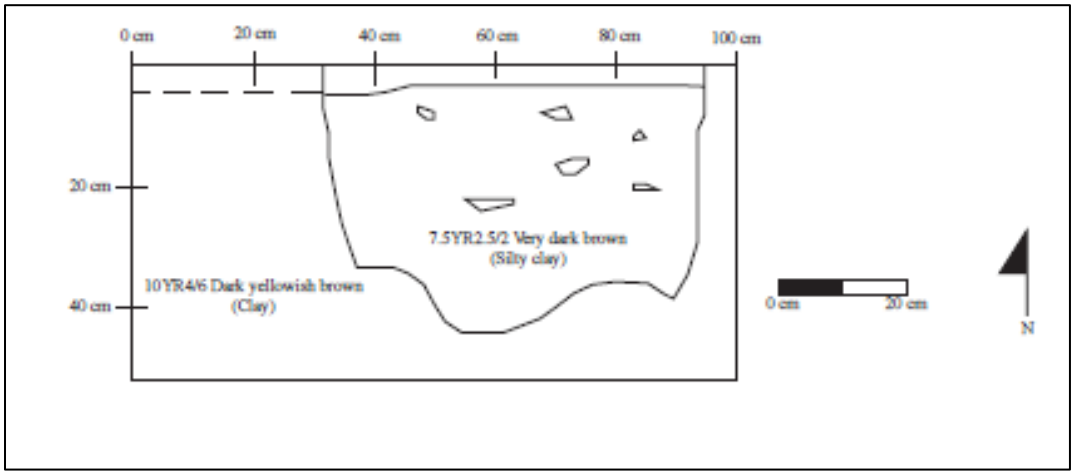

Figure 38. Profile view of Feature 527.

Test Unit N909/E971

Test Unit N909 E971 was placed adjacent to Test Unit N909 E970 to identify a posthole pattern. This test unit was excavated by shovel in four arbitrary 10-cm levels, which consisted of plowzone. Plowzone soil was a very dark brown (10YR2/2) loamy clay. At a depth of 40 cmbs (Midden Level 1), soil changed to a strong brown (7.5YR4/6) silty clay. One feature was identified in the test unit: Feature 535. Excavation ceased at approximately 52cmbs. A total of 533 artifacts was recovered from this test unit.

Feature 535 is a posthole located in the northeastern part of the unit. It was located at a depth of 42 cmbs. The feature was mapped and photographed (Figure 39). The southern half of the feature was bisected and excavated and a profile map was drawn (Figure 40). It was 27-cm wide and extended to a depth of 14 cm. Soil in this feature was a dark brown (10YR3/3) silty loam. A total of 14 artifacts was recovered from the feature. These included animal bone, shell, botanicals, ceramics, and lithics.

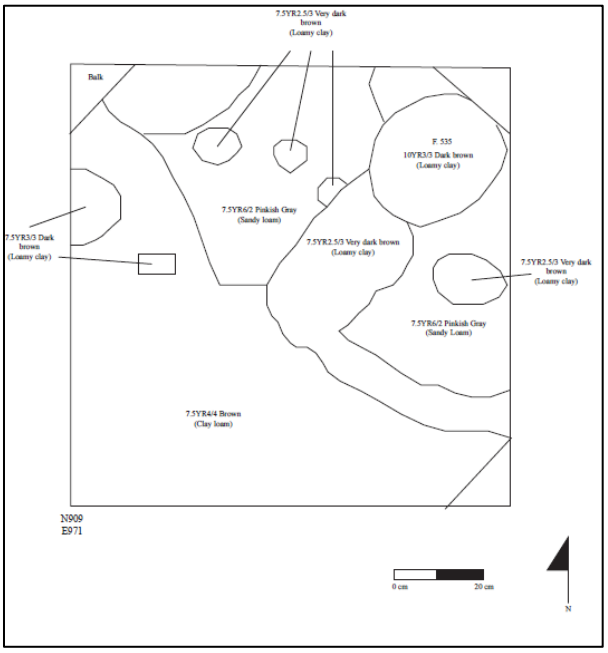

Figure 39. Plan view of Test Unit N909/E971 showing Feature 535.

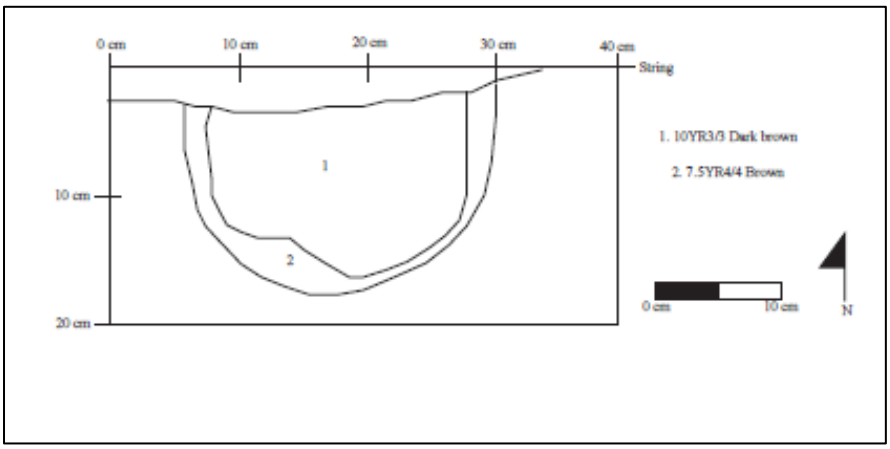

Figure 40. Profile view of Feature 535.

Summary

At Structure 6 there were 14 features identified. These included a midden, hearth, pit, postmold or postholes (Table 2). Based on the types and locations of the features, the excavations appear to have uncovered the interior of a structure, labeled Structure 6. The two large pits are likely remains of two of the four interior posts typical of Mississippian structures, and these surround a hearth. The similar depths of all of the posts, between 50 and 60 cm, suggests the house was occupied primarily during one time period, although rebuilding likely occurred. Also, the presence of Feature 539 inside the midden pit would suggest rebuilding. Based on the other postholes, it is hard to tell if they represent partition walls, entranceways, or benches. The reason for this could be only the interior of the house was excavated. The lack of pattern makes it difficult to determine what the whole house might have looked like in the community. By looking at the interior of the structure can help understand where the ceramics came from within each test unit. Also when looking at the postholes might be able to get a clearer picture of what is happening within this structure in the community at the site. Lastly, the structure seems to be more indicative of a domestic structure based on the features.

Table 2. Features Identified from Block 4, Structure 6.						
Feature Number	**Type**	**Length**	**Depth**	**Width**	**Location**	**Excavated (Y/N)**
502	Interior Post	60 cm	25 cm	78 cm	N906 E968/969	Y
503	Posthole	10 cm	36 cm	14 cm	N906 E970	Y
506	Posthole	14 cm	9 cm	18 cm	N906 E971	Y
507	Posthole	16 cm	14 cm	23 cm	N906 E971	Y
508	Posthole	12 cm	56 cm	12 cm	N906 E971	Y
512	Posthole	15 cm	28 cm	13 cm	N907 E971	Y
516	Posthole	10 cm	54 cm	6 cm	N908 E971	Y
522	Posthole	13 cm	45 cm	12 cm	N909 E969	Y
527	Interior Post	70 cm	41 cm	65 cm	N909 E970	Y
528	Hearth	150 cm	---	125 cm	N907/908 E969/970	N
535	Posthole	25 cm	14 cm	27 cm	N909 E971	Y
538	Large Midden Pit	63 cm	12 cm	83 cm	N909 E968	Y
539	Posthole	23 cm	27 cm	18 cm	N909 E968	Y
540	Posthole	11 cm	32 cm	13 cm	N909 E968	Y

CHAPTER IV: RESEARCH QUESTIONS

This study is a ceramic analysis of Structure 6 at the Carter Robinson site. This study addresses three different aspects of these ceramics to better understand the structure and other households on the landscape. First, I examine ceramic temper to identify the occupation span of the structure. Second, I examine Structure 6 vessel morphology and surface decoration to identify activities within the structure. Third, I compare the ceramics from Structure 6 to ceramics from other structures at the site to better understand village occupation span and change over time. For this analysis, I compare the ceramics from Structure 6 to the ceramics from other households that could represent specific activities, such as shell bead production area or lithic production area.

Background of Ceramic Data at Carter Robinson (44LE10)

As discussed in Chapter 3, six structures have been identified and partially excavated at the site through multiple excavations. The structures span a range of activities and occupations (Meyers 2017:3) based on radiocarbon dating, ceramic temper, and vessel morphology (Meyers 2017:7). Temper data were correlated with radiocarbon dates from stratigraphic levels. Vessel morphology was used to identify different household activities across the community and through time. In Structure 1, located directly north of the mound, mostly plates and bowls were recovered (Meyers 2017:6), and according to radiocarbon dates the indicated occupation

occurred at the middle and late occupation (Meyers 2011:254). This structure lacked a hearth, was very large, and was open on one end, suggesting it may have been used for a special purpose such as feasting. Structure 2, located 80 m east of the mound, contained a range of vessel types suggesting this was a domestic structure (Meyers 2017:7). The ceramic analysis results pertain only to the upper structure, as very limited excavations were done on the middle and lower structure, and, as a result it is not clear if or how the structure's use changed over time. Structure 3, located 25 m northeast of the eastern edge of the mound, appeared to be swept clean after abandonment. An analysis of the structure's ceramics indicated occupation occurred at the beginning of settlement (Meyers 2011:191). Finally, for Structure 4, located adjacent to Structure 1, occupation may have occurred during the middle part of settlement (Meyers 2011:220). Structure 4 contained a range of ceramic vessel types. Combined with the presence of a hearth in this structure, it appeared to be the remains of a domestic structure (Meyers 2017:6-7).

Comparing both temper and vessel morphology of the different house structures can provide a better understanding of Structure 6 at Carter Robinson. Temper can show the time of occupation using the radio carbon dates that were calibrated from different house structures on the landscape. Vessel morphology can show different household activities, such as difference between domestic and craft production areas.

To better understand frontiers some pottery analyses can address questions about the types of interactions occurring within the community. For example, mixing of temper and/or surface decorations between different groups suggest that potters are sharing information. Carter Robinson there is a mixture of Mississippian tempers and Radford surface decoration (Meyers 2011, 2017). This mixture of pottery styles suggests potters are interacting to a degree that pottery recipes are mixed together, indicative of long-term relationships like intermarriage

between groups. Other, less intensive interactions may have also occurred, like trade. Exchange would be suggested by the presence of whole vessels of each type present in small quantities within households. A final possible interaction that could be seen at Carter Robinson is warfare. This one is less likely because there is no indication of a palisade that is common during times of warfare during the Mississippian period (Lewis et al. 1998:12).

Research Question

Earlier work by Meyers used shovel testing across the site combined with radiocarbon dating and ceramic analysis to identify changes in ceramic tempers over time. During the initial occupation, limestone and grit and grog tempers were used (A.D. 1250-1300). During the middle occupation (A.D. 1300-1350), pottery was tempered with shell combined with grit and grog. During the last occupation period (A.D. 1350-1400), pottery was predominantly shell tempered. Identifying the temper types present in the ceramics from Structure 6 will provide a time of occupation for the structure, based on these earlier analyses.

To identify activities present in Structure 6, an analysis of vessel morphology was undertaken. Vessel morphology can be used to show if the structure contained domestic or communal activity areas (Cobb and Butler 2016:5). According to Rice (1987:238), jars and bowls are mostly used for storage, whereas plates are used more for eating. The presence of all three types suggests activities; the preponderance of one type over another in the structure as a whole or in one portion of the structure might indicate non-domestic activities (Sinopoli 1991:124). At the same time, other data such as ceramic surface decoration can help identify activity. For example, cord-marking of a vessel can make the vessel stronger and more durable (Sinopoli 1991:65). Also, if the pottery is plain and does not have any surface treatment, it could be indicative of daily use at the specific house structure (Rice 1987:244). Knowing the vessel

morphology and other ceramic data, such as surface decoration, can give a fuller understanding of Structure 6 in the community of Carter Robinson.

The third focus of this thesis is to compare Structure 6 to other structures at the site to better understand village occupation span and change over time as well as the relationship of households to each other. The temporal assignment of the other structures was discussed in Chapter 3 and is summarized above. Temper analysis of the ceramics from Chapter 6 will be used to understand what other structures were occupied at the same time as Structure 6. At the same time, this question can help indicate if Carter Robinson is more or less autonomous political economy. What I mean by this is if there was differential access to production areas and if one person or household had complete control of this production then certain temper types might be restricted in one area. If the site was a less autonomous political economy then there should be one area that had the prestige goods or the best pottery from trade (Welch 1991). If the site was a more autonomous political economy then all households would have had access to goods in the community and the pottery should be similar when looking at the temper and surface decoration (Meyers 2011, 2017).

Once this is determined, it is important to look at the relationship between Structure 6 and other structures on the landscape in terms of activity. When looking at the house structures, it is necessary to ask, did the households have specific functions? This can be answered through ceramic analysis in conjunction with other data from the site, such as feature data (i.e., the presence or absence of a hearth), structure size, and the presence and concentration of non-utilitarian artifacts within structures. Meyers (2011, 2017) has been able to show that some house structures were used for certain functions. Structure 1 appears to have been a bead production area as well as a possible feasting area. Related to this, another question that can be asked is, did

households have different access to goods? This can be shown by the type of temper and/or vessel morphology of the ceramics. Different types of tempers used by specific houses may suggest differential access to materials or finished products. At the same time, examining the other artifacts in the structure can show differential access to non-local and non-utilitarian goods, such as access to marine shell (Blitz 1993:85; Cobb 2003:70). Using this information, I can examine all contemporaneous structures to consider if some households were more highly ranked than others. In light of Carter Robinson's frontier location, one must consider if structures at frontier chiefdoms were different than chiefdoms not located on the frontier in terms of rank and status (Lightfoot and Martinez 1995; Meyers 2015; Welch 1991).

Based on the past research, including shovel test in the area of Structure 6, the structure likely dates to the early and middle periods of occupation (Figure 41). Its location far from the mound combined with the limited pottery and other artifact types recovered, suggest it is a domestic occupation. This is also based on the presence of the central hearth, two interior posts, and a large midden pit identified during the 2015 excavations, but a full analysis of the ceramics recovered from the excavation will allow me to more definitively answer this question.

Chapter 5 will present the results of the ceramic analysis. First, I examine the temper of ceramics from Structure 6 to identify the occupation of the structure. Next, I examine Structure 6 ceramic vessel morphology, combined with other ceramic data such as surface decoration to identify activities within the structure. Lastly, I compare the ceramics from Structure 6 to other structures at the site to better understand village occupation span and change over time, as well as, the relationship of households to each other. These data will be used to more fully address how chiefdoms functioned on the frontier.

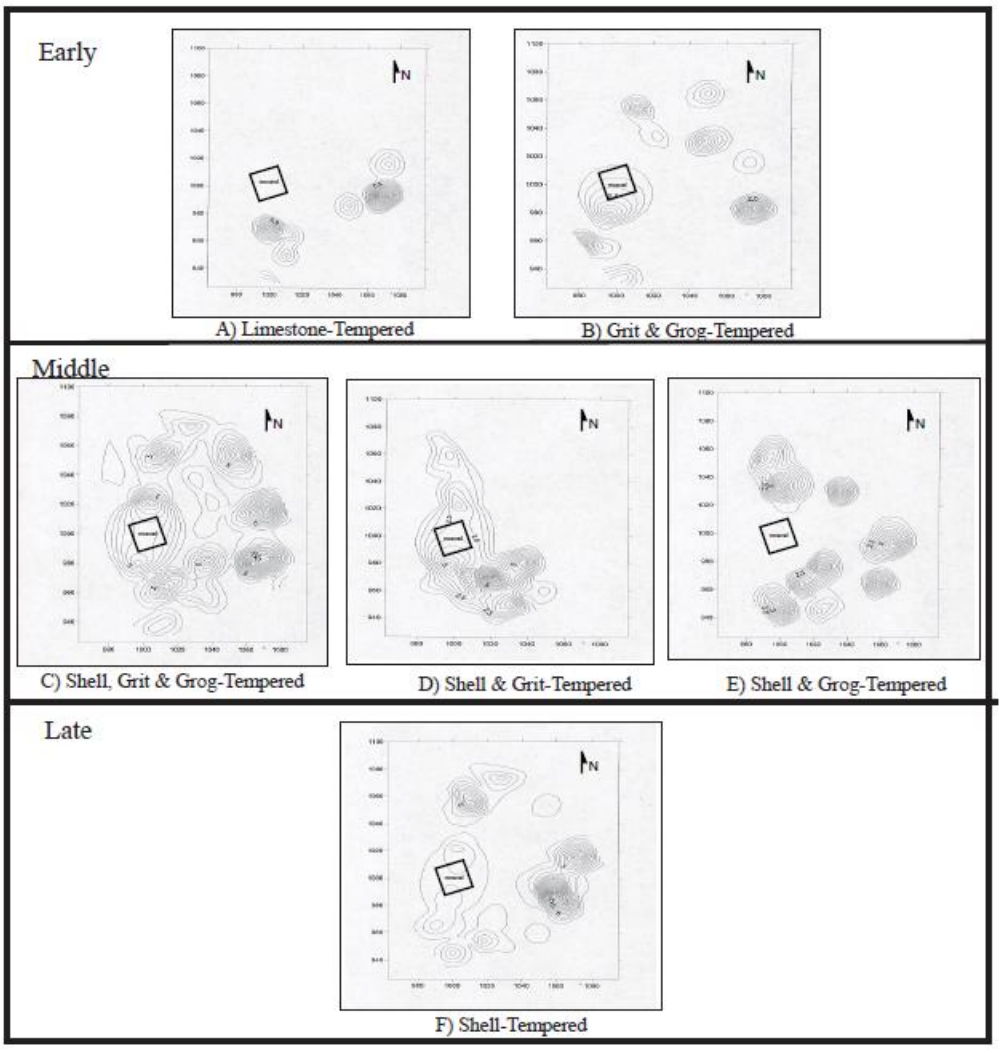

Figure 41. A Plot Showing Ceramic Concentrations Based on Shovel-Tests (Meyers 2011:147).

CHAPTER V: CERAMIC ANALYSIS METHODS AND RESULTS

This chapter presents results of analyses of ceramics from Structure 6. This analysis used the attributes, of temper, surface decoration, and vessel form to: 1) identify period of house occupation; 2) identify activities within the house; and 3) compare Structure 6 ceramics to other structures at the site to better understand site occupation and household activity at Carter Robinson. Specifically, I investigated what variation in household activities might mean in terms of site function and interaction with neighboring groups. For these comparisons, previous analyses of ceramics from six structures were used (Meyers 2011, 2017).

According to Meyers (2017:5), temper used in ceramics at the site changes through time at Carter Robinson. Limestone-tempered and grit-and-grog-tempered wares were common during early site occupation (A.D. 1250-1300). During the middle occupation (A.D. 1300-1350), the most common tempers were mixed with shell and included shell, grit-and-grog tempered, shell-and-grit tempered, and shell-and-grog tempered. During the last occupation (A.D. 1350-1400), the most common temper was shell. At the same time, vessel morphology varied by household at Carter Robinson (Meyers 2017:7). Within Structure 1, bowls were predominant, suggesting feasting may have occurred here. In Structures 2, 3 and 4, bowls, jars, and cooking vessels were present, suggesting more domestic activities occurred in these houses.

Temper

Excavations in 2015 identified the interior of Structure 6. These excavations uncovered two large interior posts, multiple smaller posts, portions of a midden, and a hearth. A total of 1,159 ceramic sherds was recovered. Of these, most (65%) were recovered from the plowzone (Table 3). Of the ceramics from non-plowzone contexts, slightly less than half (42%) were recovered from features. Sherd counts varied by test unit, suggesting remains of differential activities are present in the structure (see Figure 3).

Table 3. Count and Percent of the Ceramics by Levels in Structure 6.

Levels	**Count**	**Percent**
Plowzone (PZ)	792	68%
Midden Lv. 1	127	11%
Midden Lv. 2	38	3%
Midden Lv.3	31	2%
Features	171	15%
TOTAL	**1159**	**100%**

A total of 171 ceramic sherds was recovered from 13 features. Of these, most (41%) were recovered from Feature 528, a hearth (Table 4). The second highest amount (19%) was recovered from Feature 527, a trash pit. The third highest amount (15%) was recovered from Feature 538, a large midden pit. The lower amount of ceramics from other features is a result of feature type and size as the other features were either postholes or postmolds within the structure.

Occupation

As discussed in Chapter 4, there are diagnostic ceramic types based on temper that can show the chronology of site occupation (Meyers 2011, 2017). Table 5 shows the amount and

Table 4. Count and Percent of Ceramics from Features in Structure 6.			
Feature Numbers	**Feature Type**	**Count**	**Percent**
502	Interior Post	8	5%
503	Posthole	7	4%
506	Posthole	1	>1%
507	Posthole	1	>1%
508	Posthole	5	3%
512	Posthole	4	2%
522	Posthole	8	5%
527	Interior Post	33	19%
528	Hearth	70	41%
535	Posthole	6	4%
538	Large Pit	25	15%
539	Posthole	1	>1%
540	Posthole	2	1%
TOTAL	**---**	**171**	**100%**

percent of temper types present in Structure 6. The most common temper used was a mixture of shell, grit and grog (n=542) (47%). The second most common temper used was a combination of grit and grog (n=434) (37%) (Table 5).

Structure 6 ceramics show evidence of occupation during the early and middle periods of site occupation based on the prevalence of the two types. However, the presence of multiple types during both early and middle periods suggests that residents had access to multiple temper materials or vessels. The combined sand tempers are likely the Dan River ceramic type, found east of the site area, and indicate interaction with Dan River groups during the earlier part of site occupation. Pisgah wares are also present, which is indicative of the early occupation period, as identified by their distinctive design and temper. Pisgah sites are located in western North Carolina (Dickens 1976:17). Pisgah decorations include stamping and the rims are either collared or thickened with punctations and/or incised line (Dickens 1976:177-178).

Table 5. Count and Percent of Temper of Ceramics in Structure 6.			
Occupation	**Temper**	**Count**	**Percent**
Early	Grit	7	>1%
	Grog	14	1%
	Grit and Grog	434	37%
	Grog and Mica	3	>1%
	Sand and Grog	4	>1%
	Sand and Grit	1	>1%
	Sand and Quartz	2	>1%
	Sand, Grit and Grog	10	1%
	Sand, Grog and Quartz	5	>1%
Middle	Shell and Grog	68	6%
	Shell and Grit	39	3%
	Shell, Grit and Grog	540	47%
	Shell, Grog and Mica	19	2%
	Shell, Grog and Soapstone	4	>1%
	Shell, Grit, Grog and Soapstone	1	>1%
	Shell and Limestone	1	>1%
Late	Shell	7	>1%
TOTAL	**---**	**1159**	**100%**

Surface decoration can also serve as a chronological and social marker. However, ceramics from the two cultures represented at the site, Mississippian and Radford, do not show much change over time. As a result, surface decoration may be more indicative of interaction between these two groups. The most common Mississippian ceramics are shell-tempered, plain ceramic wares and vessel forms include bowls that have handles (Griffin 1952:226). The Emergent Mississippian period, known as Martin Farm (A.D. 900-1000), is identified by limestone-tempered, red-filmed pottery and sand-tempered with complicated stamped sherds. Next, the Early Mississippian Hiwassee Island period (A.D. 1000-1300), is identified by shell-temper with red-filmed varieties and some plain sherds (Meyers 2017:3). The later Mississippian Dallas pottery (A.D. 1300-1600) is shell-tempered with a variety of surface decorations, which include plain, cord-marked, incised, and fabric impressed (Meyers 2017:3). Radford ceramics are limestone-tempered, cord marked and plain, and the vessel forms are limited to storage and

cooking vessels (Egloff 1987). Dan River and Pisgah ceramic sherds were mostly stamped and sometimes sand-tempered (Egloff 1987), and the most common vessel form has collared rims (Meyers 2011:271). In Structure 6, 20% of the ceramic surface decorations could not be determined (Table 6). Of those that could be determined, the most common surface decoration was cord-marked (29%) followed by plain (25%).

Table 6. Count and Percent Of Surface Decoration of Ceramics in Structure 6.

Surface Treatment	**Count**	**Percent**
Plain	288	25%
Stamped-Pisgah	4	>1%
Cord-marked	341	29%
Cross-Cord-marked	9	>1%
Smoothed	68	6%
Smoothed w/ Fillets	1	>1%
Smoothed/Cord-marked	2	>1%
Incised Plain	2	>1%
Incised Cord-marked	1	>1%
Painted	1	>1%
Incised Simple Stamped	11	>1%
Indeterminate	244	21%
N/A-residual	187	16%
TOTAL	**1159**	**100%**

Surface decoration can give a fuller understanding of what is happening within Structure 6. Within the structure, there are minor combinations of Mississippian styles (incising and fillets) and Radford (cord-marked) suggesting people here may be combining styles (n=3). Six percent of the assemblage was smoothed, which may indicate a desire to downplay cultural identity by the occupants of the structure. These cultural affiliations are inconclusive on their own; when temper and surface decoration are combined cultural affiliation is clearer (Table 7).

Table 7. Count of Temper and Surface Decoration in Structure 6.			
Temper	**Surface Decoration**	**Count**	**Percentage**
Grit	Cord-marked	1	>1%
	Smoothed	1	>1%
	Incised Plain	1	>1%
	N/A-residual	4	>1%
Grog	Cord-marked	4	>1%
	Plain	4	>1%
	Indeterminate	3	>1%
	N/A-residual	3	>1%
Grit and Grog	Cord-marked	118	10%
	Cross-Cord-marked	3	>1%
	Smoothed	24	2%
	Plain	143	12%
	Incised Simple Stamped	11	1%
	Incised Cord-marked	1	>1%
	Indeterminate	87	7%
	N/A-residual	47	4%
Grog and Mica	Indeterminate	3	>1%
Sand and Grog	Stamped-Pisgah	3	>1%
	N/A-residual	1	>1%
Sand and Grit	Plain	1	>1%
Sand and Quartz	Smoothed	1	>1%
	Indeterminate	1	>1%
Sand, Grit and Grog	Plain	1	>1%
	Smoothed	3	>1%
	Smoothed w/ Fillets	1	>1%
	Indeterminate	4	>1%
	N/A-residual	1	>1%
Sand, Grog and Quartz	Smoothed	1	>1%
	Indeterminate	4	>1%
Shell and Grog	Cord-marked	24	2%
	Cross-Cord-marked	1	>1%
	Plain	9	>1%
	Smoothed	1	>1%
	Indeterminate	31	3%
	N/A-residual	6	>1%
Shell and Grit	Cord-marked	9	>1%
	Indeterminate	6	>1%
	N/A-residual	18	2%
Shell, Grit and Grog	Cord-marked	165	14%
	Cross-Cord-marked	5	>1%
	Plain	129	11%
	Incised Plain	1	>1%

Table 7. (cont). Count of Temper and Surface Decoration in Structure 6.			
Temper	**Surface Decoration**	**Count**	**Percentage**
Shell, Grit and Grog	Smoothed	37	3%
	Smoothed/Cord-marked	2	>1%
	Stamped-Pisgah	1	>1%
	Painted	1	>1%
	Indeterminate	103	9%
	N/A-residual	97	8%
Shell, Grog and Mica	Cord-marked	17	2%
	Plain	1	>1%
	N/A-residual	2	>1%
Shell, Grog and Soapstone	Cord-marked	1	>1%
	N/A-residual	3	>1%
Shell, Grit, Grog and Soapstone	Indeterminate	1	>1%
Shell and Limestone	N/A-residual	1	>1%
Shell	Cord-marked	3	>1%
	N/A-residual	4	>1%
TOTAL	**---**	**1159**	**100%**

Table 7 shows how temper and surface decoration changed over time suggesting degree of interaction between groups. Early on, as indicated by the temper, there is more plain than cord-marked pottery and more incising. The temper and surface decoration suggests Mississippian is more predominant during the early occupation. By the middle occupation, cord-marking is more predominant than plain, and smoothing increases. This suggests more interaction with Radford groups and a downplaying of identity (Meyers 2017:8).

Ceramic appendages can be indicative of change over time and interaction between groups. For example, lug handles and support appendages are distinctive to Mississippian types (Lewis and Kneberg 1970:94; Meyers 2017:4). In Structure 6, the most common appendage recovered was the lug handle (n=15), found on 94% of all handles recovered in the structure (Table 8). Of these, the temper of ten of the lug handles indicates a middle period of occupation, while the remaining lug handles indicate an earlier occupation (Table 9). The overwhelming

presence of lug handle types within the structure is distinctive of Mississippian. When combined with the temper and surface decoration data presented above, this suggests that the inhabitants of the structure identified as "Mississippian" and less Radford (Meyers 2017:8). As stated earlier, during the earlier period, the Mississippian type is predominant and during the middle period, the ceramic was mixed with Radford types, mostly in surface decoration. The mixture of Mississippian temper and Radford surface decoration does suggest interaction occurred between the two groups. This interaction was more substantial than trade. Evidence of trade would include Mississippian or Radford (i.e., not mixed) vessels in the structure. Rather, what is present are ceramics with Radford surface decoration and Mississippian tempers, or in some cases a smoothing over of the Radford surface decorations. Such a mixture suggests entrenched relationships such as intermarriage were present in Structure 6.

Table 8. Count and Percent of Appendages in Structure 6.

Appendages	**Count**	**Percent**
Lug	15	94%
Support	1	6%
TOTAL	**16**	**100%**

Table 9. Count and Percent of Temper of the Lug Handles.

Temper	**Count**	**Percent**
Shell, Grit and Grog	9	60%
Grit and Grog	4	27%
Shell and Grog	1	7%
TOTAL	**15**	**100%**

Based on the temper data presented above the structure was occupied during the early and middle periods of site occupation. Table 10 shows the temper types present per level. In Structure 6, the plowzone contained the greatest diversity of ceramic tempers with the most common being shell, grit, and grog (n=333) (29%) (Table 10). This is not surprising as the

plowzone lacks integrity. Also, once the plowzone depth was defined during initial excavation, it was sorted as one arbitrary (40-cm) level. In the midden, which contained two 10-cm levels (1 and 2), there is less diversity based in part on its smaller size as compared to the plowzone. In Level 1, the most common temper present was grit-and-grog followed by shell, grit, and grog (Table 10). Level 2 of the midden is predominated by grit and grog, while Level 3 is predominated by shell, grit and grog tempers. The data in Table 10 suggests the midden was used during the early and middle periods of occupation, but probably most used during the end of early occupation, based on the lower numbers of shell and grit and/or grog temper combinations. The presence of Feature 539, a posthole, within the midden suggests that there might have been a period of re-building. At the same time, Feature 539 extends to a total depth of 97 cmbs which makes it the deepest feature within this structure. This also tells us about post-depositional use of the midden, that is, filling or throwing in trash in the feature during the time of abandonment. For the features, again primarily postholes, the common temper was shell, grit and grog (Table 10). The features, however, tell a different story because they appear to date to the middle of the occupation; very few are associated with the earlier occupation. This could represent house abandonment after the middle occupation, and features were filled in with nearby soil.

In terms of surface decoration, once again, the greatest diversity in ceramics is found in the plowzone where the most common surface treatment was cord-marked (n=237) (Table 11). Most of the ceramics from all levels of the midden had indeterminate surface decorations. Of those whose surface decoration could be determined, the most common was cord-marked (Table 11), which was also true of the features. However, the upper level of the midden shows a lot of cord-marking and smoothed surface decoration sherds, suggesting a smoothing over of group identity. Smoothing as a surface treatment is an indication of identity because the people in the

Table 10. Count of Temper by Levels in Structure 6.						
Temper	**Plowzone (PZ)**	**Midden Lv. 1**	**Midden Lv. 2**	**Midden Lv. 3**	**Features**	**TOTAL**
Grit	5	1	---	---	1	**7**
Grog	10	3	---	---	1	**14**
Grit and Grog	325	64	19	5	21	**434**
Grog and Mica	3	---	---	---	---	**3**
Sand and Grog	3	---	---	---	1	**4**
Sand and Grit	1	---	---	---	---	**1**
Sand and Quartz	1	---	1	---	---	**1**
Sand, Grit and Grog	8	2	---	---	---	**10**
Sand, Grog and Quartz	5	---	---	---	---	**5**
Shell and Grog	42	8	6	8	8	**72**
Shell and Grit	28	---	3	---	2	**33**
Shell, Grit and Grog	333	49	9	18	133	**542**
Shell, Grog and Mica	19	---	---	---	---	**19**
Shell, Grog and Soapstone	---	---	---	---	4	**4**
Shell, Grit, Grog and Soapstone	1	---	---	---	---	**1**
Shell and Limestone	1	---	---	---	---	**1**
Shell	7	---	---	---	---	**7**
TOTAL	**792**	**127**	**38**	**31**	**171**	**1159**

area might want to show they are Radford peoples without explicitly showing it on the pottery (Meyers 2017:9). This smoothing is not present in the earlier levels of the middens. It is present in the features, however.

Examining the surface decoration and temper by level is useful for identifying interaction between people on the landscape (Table 12). When looking at the plowzone the most common temper is grit and grog with the surface decoration being plain (n=140). The second most common is shell, grit and grog with cord-marked surface decoration (n=103). Next Midden

Table 11. Count of Surface Decoration by Levels in Structure 6.						
Surface Decoration	**Plowzone (PZ)**	**Midden Lv. 1**	**Midden Lv. 2**	**Midden Lv. 3**	**Features**	**TOTAL**
Plain	226	29	3	---	30	**288**
Stamped-Pisgah	3	---	---	---	1	**4**
Cord-marked	237	38	8	8	50	**341**
Cross-Cord-marked	5	1	---	2	1	**8**
Smoothed	48	11	1	---	8	**68**
Smoothed w/ Fillets	1	---	---	---	---	**1**
Smoothed/ Cord-marked	2	---	---	---	---	**2**
Incised Plain	1	1	---	---	---	**2**
Incised Cord-marked	1	---	---	---	---	**1**
Painted	1	---	---	---	1	**1**
Incised Simple Stamped	11	---	---	---	---	**11**
Indeterminate	123	46	26	21	28	**244**
N/A-residual	134	1	---	---	52	**187**
TOTAL	**792**	**127**	**38**	**31**	**171**	**1159**

Level 1 most common temper is shell, grit and grog with plain surface decoration (n=29). Midden Level 2 most common temper is shell, grit and grog with cord-marked surface decoration (n=4). The Midden Level 3 most common temper is shell, grit and grog with surface decoration that is cord-marked (n=4). Lastly, when looking at the features, the most common temper is shell, grit and grog with cord-marked surface decoration (n=38). This helps explain some degree of interaction because the temper is more indicative of Mississippian and the surface decoration is more indicative of Radford culture. Also, with the temper and surface decoration changing from mostly grit and grog to shell, grit and grog and from plain to mostly cord-marked can help indicate how interaction changed through time. This change might have meant that this community was trying to attract more people in this area because Carter

Robinson was labor poor but land-rich (Meyers 2017:9). Being able to express Mississippian and Radford traditions in the pottery could help with the social identity of people in this community.

The most common temper in all of the features is shell, grit and grog (n=133) (78%) (Table 13) followed by is grit and grog (n=21) (12%). The feature types present in the structure included postholes, pits and a hearth. Feature 528 is a hearth, Feature 538 is a large midden pit, and the remaining features are posts. When looking at the features separately, the highest amount of ceramics were found in Feature 528 (hearth) and the most common temper there is shell, grit and grog (n=52) (30%). Feature 527, an interior post, contained the second highest amount of ceramics; the most common temper is shell, grit and grog (18%). At the same time, Feature 538, a large midden pit, seems to have the highest amount of diversity of temper with six different types.

The temper and surface decoration analyses clearly show that Structure 6 was first occupied during the early occupation, but its main was occupation during the middle period. It appears to have been abandoned after this point. This further suggests that most of the posts were filled in after occupation after the middle occupation, but that Feature 538, the large midden pit, was used throughout the house occupation and suggests that it was filled in at the same time of abandonment. Feature 528, the hearth, has the highest diversity of temper and surface decoration that shows occupation throughout the early and middle occupation. This is not surprising, as most vessels would be used near the hearth. Table 14 shows the temper and surface decorations of the features. The hearth is further evidence of an early but primarily middle period of occupation for this structure. By looking at the temper and surface decoration, from the central hearth, the ceramic suggest a degree of interaction. Another Feature 538, a large midden pit, has the highest diversity of temper, but little diversity in terms of surface decoration.

Table 12. Count of Temper and Surface Decoration by Levels in Structure 6.							
Temper	**Surface Decoration**	**Levels**					**TOTAL**
		Plowzone (PZ)	**Midden Lv. 1**	**Midden Lv. 2**	**Midden Lv. 3**	**Features**	
Grit	Cord-marked	1	---	---	---	---	**1**
	Smoothed	---	---	---	---	1	**1**
	Incised Plain	---	1	---	---	---	**1**
	N/A-residual	4	---	---	---	---	**4**
Grog	Cord-marked	4	---	---	---	---	**4**
	Plain	4	---	---	---	---	**4**
	Indeterminate	---	3	---	---	---	**3**
	N/A-residual	2	---	---	---	1	**3**
Grit and Grog	Cord-marked	87	20	3	2	6	**118**
	Cross-Cord-marked	2	1	---	---	---	**3**
	Smoothed	14	9	---	---	1	**24**
	Plain	140	---	3	---	---	**143**
	Incised Simple Stamped	11	---	---	---	---	**11**
	Incised Cord-marked	1	---	---	---	---	**1**
	Indeterminate	34	34	13	3	3	**87**
	N/A-residual	36	---	---	---	11	**47**
Grog and Mica	Indeterminate	3	---	---	---	---	**3**
Sand and Grog	Stamped-Pisgah	3	---	---	---	---	**3**
	N/A-residual	---	---	---	---	1	**1**
Sand and Grit	Plain	1	---	---	---	---	**1**
Sand and Quartz	Smoothed	---	---	1	---	---	**1**
	Indeterminate	1	---	---	---	---	**1**

Table 12. (cont). Count of Temper and Surface Decoration by Levels in Structure 6.							
Temper	**Surface Decoration**	**Levels**					**TOTAL**
		Plowzone (PZ)	**Midden Lv.1**	**Midden Lv.2**	**Midden Lv.3**	**Features**	
Sand, Grit and Grog	Plain	1	---	---	---	---	**1**
	Smoothed	1	2	---	---	---	**3**
	Smoothed w/ Fillets	1	---	---	---	---	**1**
	Indeterminate	4	---	---	---	---	**4**
	N/A-residual	1	---	---	---	---	**1**
Sand, Grog and Quartz	Smoothed	1	---	---	---	---	**1**
	Indeterminate	4	---	---	---	---	**4**
Shell and Grog	Cord-marked	14	2	1	2	5	**24**
	Cross-Cord-marked	---	---	---	1	---	**1**
	Plain	9	---	---	---	---	**9**
	Smoothed	1	---	---	---	---	**1**
	Indeterminate	13	5	5	5	3	**31**
	N/A-residual	5	1	---	---	---	**6**
Shell and Grit	Cord-marked	9	---	---	---	---	**9**
	Indeterminate	2	---	3	---	1	**6**
	N/A-residual	17	---	---	---	1	**18**
Shell, Grit and Grog	Cord-marked	103	16	4	4	38	**165**
	Cross-Cord-marked	3	---	---	1	1	**5**
	Plain	70	29	---	---	30	**129**
	Incised Plain	1	---	---	---	---	**1**
	Smoothed	31	---	---	---	6	**37**
	Smoothed/ Cord-marked	2	---	---	---	---	**2**

Table 12. (cont). Count of Temper and Surface Decoration by Levels in Structure 6.							
Temper	**Surface Decoration**	**Levels**					**TOTAL**
		Plowzone (PZ)	**Midden Lv.1**	**Midden Lv.2**	**Midden Lv.3**	**Features**	
Shell, Grit and Grog	Stamped-Pisgah	---	---	---	---	1	**1**
	Painted	---	---	---	---	1	**1**
	Indeterminate	60	4	5	13	21	**103**
	N/A-residual	62	---	---	---	35	**97**
Shell, Grog and Mica	Cord-marked	17	---	---	---	---	**17**
	Plain	1	---	---	---	---	**1**
	N/A-residual	2	---	---	---	---	**2**
Shell, Grog and Soapstone	Cord-marked	---	---	---	---	1	**1**
	N/A-residual	---	---	---	---	3	**3**
Shell, Grit, Grog and Soapstone	Indeterminate	1	---	---	---	---	**1**
Shell and Limestone	N/A-residual	1	---	---	---	---	**1**
Shell	Cord-marked	3	---	---	---	---	**3**
	N/A-residual	4	---	---	---	---	**4**
TOTAL	---	**792**	**127**	**38**	**31**	**171**	**1159**

Table 13. Count of Temper of Features in Structure 6.														
Temper	**Feature**													**TOTAL**
	502	**503**	**506**	**507**	**508**	**512**	**522**	**527**	**528**	**535**	**538**	**539**	**540**	
Grit	---	---	---	---	---	---	---	---	---	---	1	---	---	**1**
Grog	---	---	---	---	---	---	---	---	---	---	1	---	---	**1**
Shell and Grog	---	---	---	---	---	---	---	---	2	---	6	---	---	**8**
Shell and Grit	---	---	---	---	---	---	1	---	---	---	1	---	---	**2**
Shell, Grit and Grog	7	7	1	---	4	4	3	31	52	6	15	1	2	**133**
Grit and Grog	1	---	---	1	1	---	---	2	16	---	---	---	---	**21**
Sand and Grog	---	---	---	---	---	---	---	---	---	---	1	---	---	**1**
Shell, Grog and Soapstone	---	---	---	---	---	---	4	---	---	---	---	---	---	**4**
TOTAL	**8**	**7**	**1**	**1**	**5**	**4**	**8**	**33**	**70**	**6**	**25**	**1**	**2**	**171**

Table 14. Count of Temper and Surface Decoration of Features in Structure 6.															
Temper	**Surface Decoration**	**Feature**													**TOTAL**
		502	**503**	**506**	**507**	**508**	**512**	**522**	**527**	**528**	**535**	**538**	**539**	**540**	
Grit	Smoothed	---	---	---	---	---	---	---	---	---	---	1	---	---	**1**
Grog	N/A-residual	---	---	---	---	---	---	---	---	---	---	1	---	---	**1**
Shell and Grog	Cord-marked	---	---	---	---	---	---	---	---	2	---	3	---	---	**8**
	Indeterminate	---	---	---	---	---	---	---	---	---	---	3	---	---	
Shell and Grit	Indeterminate	---	---	---	---	---	---	1	---	---	---	---	---	---	**2**
	N/A-residual	---	---	---	---	---	---	---	---	---	---	1	---	---	
Shell, Grit and Grog	Cord-marked	2	---	---	---	---	2	1	14	13	1	5	---	---	**133**
	Cross-Cord-marked	---	---	---	---	---	---	---	---	---	---	1	---	---	
	Smoothed	---	---	---	---	---	---	---	---	6	---	---	---	---	
	Plain	---	---	---	---	---	---	---	17	13	---	---	---	---	
	Stamped-Pisgah	---	---	---	---	---	---	---	---	---	---	1	---	---	
	Painted	---	---	---	---	---	---	---	---	---	1	---	---	---	
	Indeterminate	---	7	---	---	---	---	---	---	6	---	8	---	---	
	N/A-residual	5	---	1	---	4	2	2	---	14	4	---	1	2	

Table 14. (cont). Count of Temper and Surface Decoration of Features in Structure 6.															
Temper	**Surface Decoration**	**Feature**													**TOTAL**
		502	503	506	507	508	512	522	527	528	535	538	539	540	
Grit and Grog	Cord-marked	1	---	---	---	---	---	---	---	6	---	---	---	---	**21**
	Smoothed	---	---	---	---	---	---	---	---	1	---	---	---	---	
	Indeterminate	---	---	---	---	---	---	---	---	3	---	---	---	---	
	N/A-residual	---	---	---	1	1	---	---	2	6	---	---	---	---	
Sand and Grog	N/A-residual	---	---	---	---	---	---	---	---	---	---	1	---	---	**1**
Shell, Grog and Soapstone	Cord-marked	---	---	---	---	---	---	1	---	---	---	---	---	---	**4**
	N/A-residual	---	---	---	---	---	---	3	---	---	---	---	---	---	
TOTAL	**---**	**8**	**7**	**1**	**1**	**5**	**4**	**8**	**33**	**70**	**6**	**25**	**1**	**2**	**171**

Household Activities

Multiple structures are present at Carter Robinson, and some appear to be special use while others are domestic (Meyers 2011; 2017). The second question addressed in this thesis is what type of activities are present in Structure 6. Specifically, is it basic domestic household (like Structure 4) or is there evidence of special purpose activities, as seen in Structure 1 extension? To answer this it is necessary to examine each test unit individually to see where the sherds are located within the structure and compare these amounts. Second, a vessel morphological analysis was done to identify activity types within the structure.

The highest amount of sherds is in Test Unit N909 E969 (14%) (Table 15; Figure 41). The second highest amount of ceramic sherds in in Test Unit N909 E970 (13%) (Table 15; Figure 41). The presence of two features in these test units likely elevates the ceramic sherd counts, particularly in Test Unit N909 E968 which contained the deep midden pit. It is interesting, though, that the highest amount of ceramic sherds comes from Test Unit N909 E969, although it only contains one feature, a small posthole. When looking at Feature 528, the hearth, it has the highest amount of ceramic sherds (n=70) (Table 15). The reason this feature could have the highest amount is because this is where most of the cooking is happening and many of the ceramic pieces could have broken. It seems the highest amounts are in large features, except Feature 502, the interior post, which has one of the lowest amounts (n=26). The reason this feature could have a low amount of sherds is because it was an interior post that might not have been moved as much during the time of rebuilding.

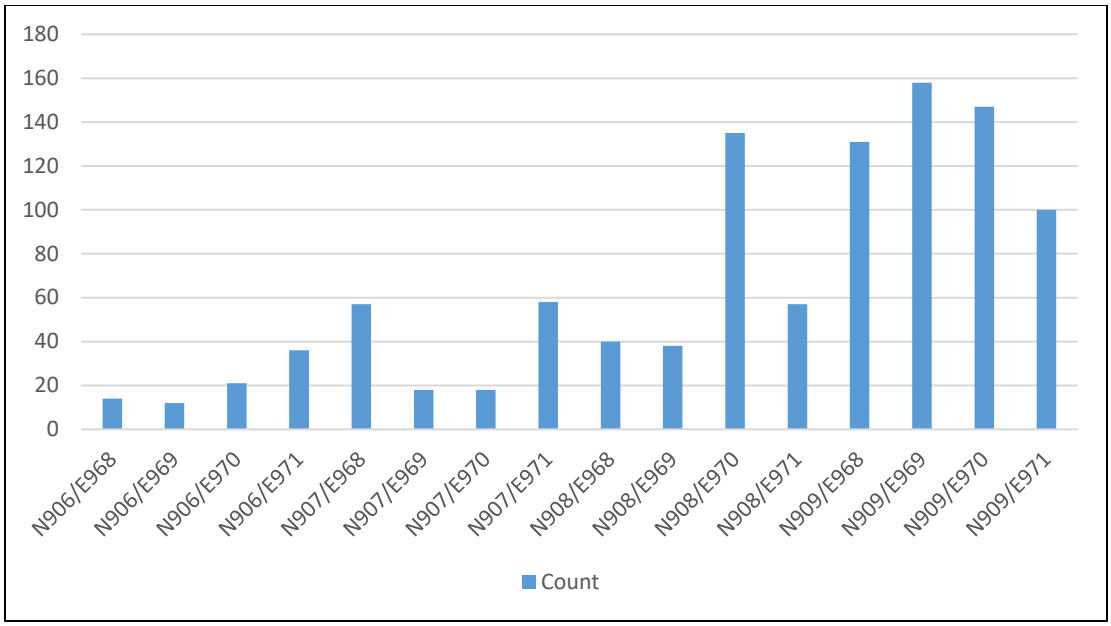

Figure 42. Count of Ceramics of Test Units in Structure 6.

Table 15. Count and Percent of Test Units in Structure 6.			
Test Unit (TU)	**Features**	**Count**	**Percent**
N906 E968	Interior Post	14	1%
N906 E969	Interior Post	12	1%
N906 E970	Posthole	21	2%
N906 E971	Postholes	36	3%
N906 E968-969	---	8	1%
N907 E968	---	57	5%
N907 E969	Hearth	18	2%
N907 E970	Hearth	18	2%
N907 E971	Hearth/Posthole	58	5%
N907-908 E969-970	---	70	6%
N908 E968	---	40	4%
N908 E969	Hearth	38	3%
N908 E970	Hearth	135	12%
N908 E971	Hearth/Posthole	57	5%
N909 E968	Large Midden Pit/Posthole	131	11%
N909 E969	Posthole	158	14%
N909 E970	Interior Post	147	13%
N909 E971	Posthole	100	9%
TOTAL	---	**1118**	**100%**

Vessel Morphology

Rim angle measurements and orifice diameter can provide information about vessel morphology. Although these were done, there were not many rim sherds (n=47) recovered from the structure. The most common rim angle was 110-119 degrees (n=18) (38%) (Table 16; Figure 42). The second-most common rim angle is 90-99 degrees (n=9) (19%), and the third most common is 120-129 degrees (n=8) (17%) (Table 16; Figure 42). The 90-99 rim angle can make the ceramic sherd seem like it is straighter. The reason for a straight rim is to possibly to keep liquids in and help against spilling through movements (Hally 1986:280). On the other hand, the 120-129 degree can make it seem like the rim is flaring out a little make it more common with a bowl. Flaring rims are easier for pouring liquids out or cooking in a bigger vessel (Hally 1986:280). Most rims were too small to determine orifice diameter (n=39) (Table 17). Not knowing the orifice diameter makes it harder to know exactly what types of vessels were in the structure. The second-most common is 18 cm (n=2) (Table 17). The orifice diameter being 18 cm more common with a jar. Vessel morphology can help give a better understanding of possible vessel function in the structure.

Table 16. Count and Percent of Rim Angle in Structure 6.

Rim Angle (degrees)	Count	Percent
70-79	1	2%
90-99	9	19%
100-109	5	11%
110-119	18	38%
120-129	8	17%
130-139	5	10%
140-149	1	2%
TOTAL	**47**	**100%**

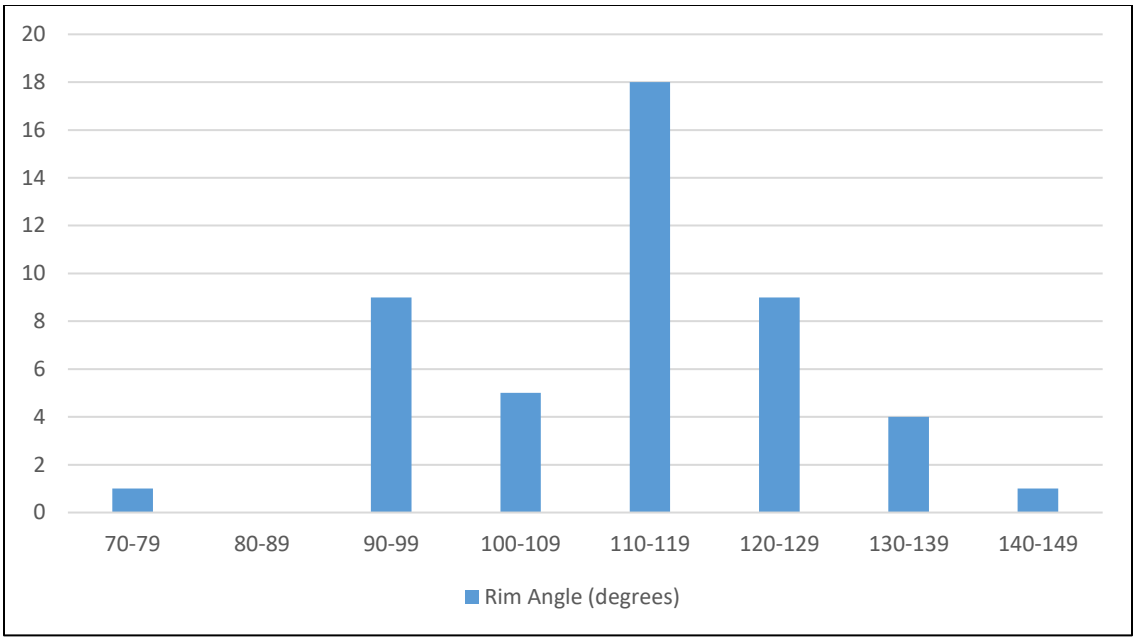

Figure 43. Rim Angle of rim sherds in Structure 6.

Table 17. Count and Percent of Orifice Diameter in Structure 6.		
Orifice Diameter (cm)	**Count**	**Percent**
Too Small	39	83%
10	1	2%
11	1	2%
15	1	2%
18	2	4%
19	1	2%
28	1	2%
37	1	2%
TOTAL	**47**	**100%**

Examination of both the orifice diameter and rim angle can give a better understanding of the types of vessel forms and vessel functions. A flaring rim such as 110-129 degrees combined with a large orifice diameter such as either 28 or 37 centimeters can indicate a flaring rim bowl (Table 18). A possible Southeastern type that contains these attributes includes small or large carinated bowl (Hally 1986:282-283). This type might also be used for cooking or storing liquids. When looking at a straight rim such as 90-99 degrees with a smaller orifice diameter

such as either 11 or 15 centimeters can indicate a jar based on the possible constriction. A possible Southeastern type that contains these attributes includes Mississippian jar (Hally 1986:282).

Table 18. Count of Rim Angle and Orifice Diameter in Structure 6.

Rim Angle (degrees)	Orifice Diameter (cm)	Count	TOTAL
70-79	10	1	**1**
90-99	Too small	6	**9**
	11	1	
	15	1	
	18	1	
100-109	Too small	5	**5**
110-119	Too small	15	**18**
	18	1	
	19	1	
	37	1	
120-129	Too small	7	**8**
	28	1	
130-139	Too small	5	**5**
140-149	Too small	1	**1**
TOTAL	**---**	**47**	**47**

Vessel form can be used to understand the types of household activities within the structure. For this analysis, vessel rims were studied. However, it is important to note that the amount of rim sherds is rather small (n=47), so these data are suggestive rather than conclusive. The rim analysis shows a variety of vessel forms were present (Table 19) including bowls (n=4) (9%), carinated/collared jars (n=3) (6%), one plate, and one plate and/or pan. Most of the rims, however, were too small for measurements to determine vessel type.

Table 19. Count and Percent of Basic Form in Structure 6.		
Form	**Count**	**Percent**
Plate/Pan	1	2%
Pan	1	2%
Bowl	4	9%
Carinated/Collared Jar	3	6%
Indeterminate	38	81%
TOTAL	**47**	**100%**

Although small, the data suggest a domestic rather than specialized occupation because of the presence of plates, bowls, and jars inside the structure, which indicate storage, cooking, and eating were all occurring there. However, the large number of bowls as compared to the other vessel forms is interesting and may some suggest feasting was occurring. At the same time, it could be that the sherds were a part of the same vessel and there are not as many bowls as previously indicated in this structure. Having a smaller sample size makes it harder to know for sure what types of vessels are being used in this structure.

Table 20 shows the location of vessel forms by level. All were recovered from the plowzone or the midden, and most were in the plowzone. It is necessary to know the levels where the rim sherds came from because it is a way to see change over time. Was the structure always predominantly a domestic structure or did its function change over time? Not surprisingly, the plowzone had the highest diversity of basic forms in the structure (n=4), but because this is a mixed context, it cannot reveal much information about change over time. Midden Level 1 has some diversity (n=3) and the highest number of bowls (n=2) than any other level. Midden Level 2 only has one bowl and Midden Level 3 has no ceramic sherds. This may suggest that the use of bowls may have increased over time. While the data still suggest this is a domestic structure, it may have also hosted feasts of some kind during the middle occupation, at the same time that ceramic tempers and surface decoration of the two traditions are mixed. There

are not enough identifiable rims by level to say anything substantive other than the use of bowls may increase over time.

Table 20. Levels of Basic Form in Structure 6.						
Basic Form	**Plowzone (PZ)**	**Midden Lv. 1**	**Midden Lv. 2**	**Midden Lv. 3**	**Features**	**TOTAL**
Plate/Pan	1	---	---	---	---	**1**
Pan	1	---	---	---	---	**1**
Bowl	1	2	1	---	---	**4**
Carinated/ Collared Jar	2	1	---	---	---	**3**
Indeterminate	31	5	---	---	2	**38**
TOTAL	**36**	**8**	**1**	---	**2**	**47**

Ceramic hardness and rim angle analyses may be able to add to determination of activity areas. Hardness data can determine the degree to which vessels can withstand daily life (Rice 1987:354). Additionally, examining hardness can assist in the identification of firing techniques. For example, the hotter the firing, the harder the ceramic should be on the exterior of the vessel (Rice 1987:357) which is indicative of use as a cooking vessel. It is important to note that I recorded hardness only for the rims (n=47). Because I was trying to identify activity areas based on vessel morphology. Table 21 shows the range of hardness present in the rim sherd. All of the rims were the same hardness, between 2.5-3. While these sherds were not very hard, the lack of variation in hardness does suggest the same person or people were making sherds used in the structure. It is likely that a hardness of 2.5-3 was sufficient for domestic needs.

Lip and rim thickness were also recorded for the rim sherds. Although a range of thicknesses are present, the most common is 6-7 mm for both walls and lips (Figure 43). Interestingly, there are some lip thicknesses that are greater than wall thicknesses in five of the nine categories. This means that thicker lips with thinner walls are the predominant rim types.

Table 21. Count and Percent of Mohs' Hardness Scale in Structure 6.		
Hardness Number	**Count**	**Percent**
1	0	0%
2	0	0%
2.5	22	47%
3	24	51%
3.5	0	0%
4	0	0%
4.5	1	2%
5	0	0%
5.5	0	0%
6	0	0%
6.5	0	0%
7	0	0%
8	0	0%
9	0	0%
10	0	0%
TOTAL	**47**	**100%**

The similarity in both wall and lip thickness of the rims may suggest that much of the pottery was used for storage (Rice 1987:209). On the other hand, there is a category of thicker walls with thinner lips. It could also mean some of the ceramics were used for pouring, which would have been made easier by thinner rim lips (Rice 1987:220). The thickness data supports the idea that this is a domestic household, based on the diversity of forms represented.

Summary of Structure 6

Based on the analysis of sherds from Structure 6, it is clear the structure was occupied during the early and middle part of site occupation. Both temper and surface decoration, and the presence of decorative elements like Mississippian lug handles, suggests a mixture of two ceramic traditions was occurring here, Mississippian and Radford. According to Meyers

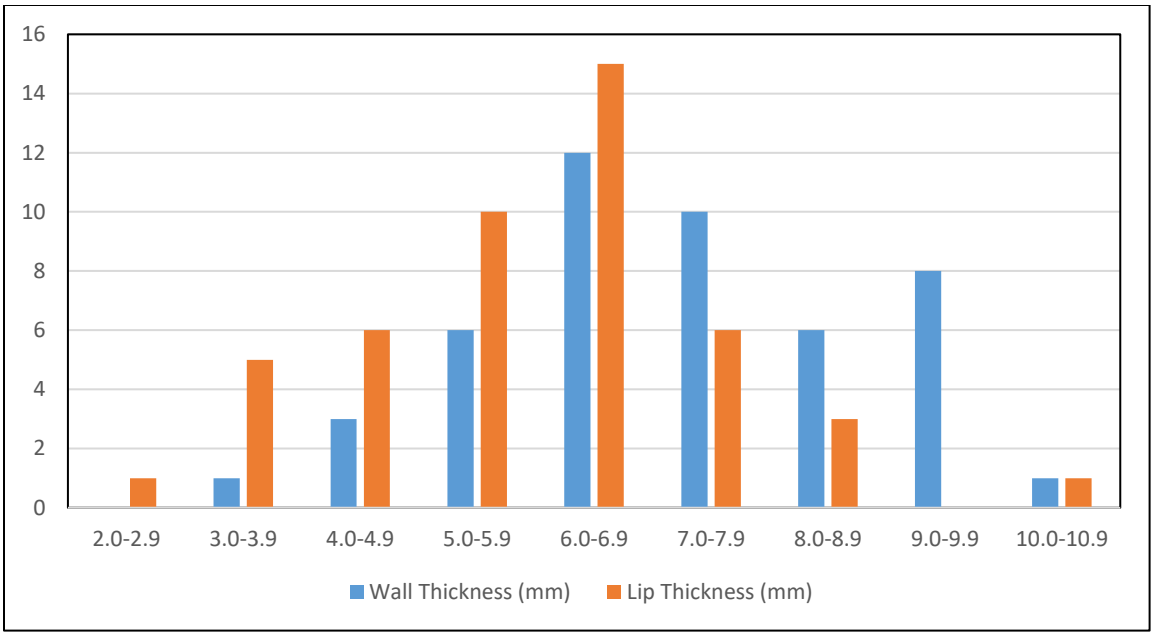

Figure 44. Wall and Lip Thickness of rim sherds in Structure 6.

(2017:8), the relationship between the two groups formed and intensified during the middle occupation. This relationship can be seen through the mixing of temper types and surface decoration suggesting interaction between the groups. In terms of surface decoration, Mississippian surface decoration changes through time from plain, during the early occupation, to cord-marked, during the middle and late occupation. There is a mixing of Radford surface decoration with the Mississippian temper, and a brushing over of some cord-marking while appendages remain Mississippian (Meyers 2017:10). This suggests interaction occurring but the predominate identification of Structure 6's inhabitants are Mississippian. Rim angle and orifice diameter are suggestive that some of the vessels are likely bowls and jars (Hally 1986:282). This can be seen through flaring rims and large orifice diameter. There is some evidence, based on wall and lip thicknesses, that suggests some of the vessels were used for storage of liquids. Evidence of household activity is less clear based on ceramics. However, the presence of features associated with domestic residences, like large interior posts and a hearth, combined with the

range of vessel forms present, are indicative of a domestic household rather than a specialized activity structure. Based on all of the information above Structure 6 is mostly likely a domestic structure that was occupied during the early (A.D. 1250-1300) and middle occupation (A.D. 1300-1350) at Carter Robinson (44LE10).

Other Structures

The third question addresses the interaction of the residents of Structure 6 with other contemporaneous households at the site. During the early period of occupation, the initial building stage of Structure 2 (2a) and a structure beneath the mound were present, as well as Structure 3. During the middle period of occupation, Structure 1, the middle part of Structure 2, and Structure 4 were present. At the same time, the mound was built during this middle part of occupation (Meyers 2011, 2017).

To understand how households might have interacted at Carter Robinson, it is important to look at the structures listed above individually and specifically examine if the structures were domestic households or were specialized activity areas. During the early occupation, there was a structure beneath the mound that was partially excavated (Meyers 2011:171). Test Unit 19 or Structure 5 contained a single post and a hearth that was present before or right at the beginning of mound construction (Meyers 2011:172). The ceramics from this level are predominantly grit-tempered and grit-and-grog-tempered, indicative of an early occupation period. The surface decoration is mostly plain. Very few rims were recovered, so no analysis of vessel morphology could be done, and it is unclear what type of structure (i.e., domestic or specialized activity) was present.

Structure 1 lacked a hearth, was unusually large compared to other structures, and may have had an open side facing the plaza or mound (Meyers 2017:6). An area north of Structure 1, the extension area, was a shell bead workshop (Meyers 2011:221) that also contained approximately 80 drills. Temper of ceramics from the structure are a combination of shell, grit and grog, suggesting a middle period of occupation. The predominant surface decoration of ceramics in this structure was cord-marked (33%) and plain (26%), but there are some stamped and burnished sherds. The temper is associated with the Mississippian culture, but the surface decoration has some cord-marked types which is associated with the Radford culture. This suggests there was interaction between these groups because of the mixing of temper and surface decoration which is similar to that seen in Structure 6. Within Structure 6, the temper of shell, grit, and grog is present in almost half of the ceramics (47%) and the surface decoration of plain (25%) and cord-marked (29%) wares. For Structure 1, the vessel morphological analysis revealed more bowls (n=30) and few pans (n=2) throughout the structure (Meyers 2017:7). Based on all the data, Structure 1 is considered a special activity area for bead production in the extension area and also feasting in the main structure, and not a domestic household. Both the house structures were contemporaneous with similar ceramic types, but the presence of additional bowls in Structure 1 indicates a feasting area, whereas the vessel morphology at Structure 6 indicates a domestic occupation. It does not appear that one structure had access to temper that another structure did not, indicating that frontiers households were more autonomous.

Structure 2 is a single-set post Mississippian style house, with three rebuilding episodes (Meyers 2017:7). Structure 2 was also occupied during the early, middle and late occupation periods; however, data is limited to four test units for the first structure that were present during

the early occupation. Looking at the ceramics during the early occupation of the structure, the predominant temper is a mixture of grit and grog and the surface decoration is mostly plain with a few nodes. The vessel morphology is mostly jars. Based on the limited data available during the early occupation, Structure 2 was likely a domestic household. During the middle period of occupation, another house was built. Its ceramic tempers include a variety of shell and grit tempered and shell, grit and grog tempered (Meyers 2011:232) types. The majority (n=168) of the surface decoration in the area was undecorated or plain, but there was some cord-marked wares (Meyers 2011:232). The upper level of Structure 2 was present, but it post-dates the occupation of Structure 6. During the last period of occupation, the upper house was built. Its ceramic tempers include shell and grit tempered and grit and grog tempered. The main surface decoration is plain and cord-marked. The main vessel type are carinated jars (n=4) (Meyers 2017:7). Based on the other artifacts in the structure, there is some evidence of craft production in the form of shell beads (Meyers 2017:7) during the third occupation. In Structure 2, the analyses are ongoing, but, at the present time there is minimal rim data. An interesting feature about Structure 2 is it was burnt and rebuilt three times which makes it different from the other structures on the landscape. Data are incomplete, but it appears to have been a comparable domestic structure during early and middle occupations, with similar types of ceramics; however, because, of the lack of rims vessel morphological comparisons are not able to be made. The burning and the shell beads occurring in the upper structure does suggest some type of different activity was present.

Structure 3 was used during the early occupation and is a wall-trench structure indicative of early Mississippian period structures. It contained a shallow hearth. This structure seemed to have been swept clean and abandoned after occupation (Meyers 2017:6), and it contains some

evidence of possible craft production of cannel coal items. The temper of the ceramic sherds from Structure 3 was predominately mixed grit types that were found mostly in the trench. Although not many sherds were recovered (n=438), most were plain or cord-marked. Only four rims were recovered, and they indicate both jars (n=5) and bowls (n=4) were present. Because of its lack of artifacts and cleaning after abandonment, little can be said about this structure, but it appears to have been domestic (Meyers 2011:191). In comparing the temper of Structure 3, it seems to be similar to the earlier occupation period of Structure 6 with the most common being grit and grog (n=434). Then, when comparing the surface decoration of Structure 3 had the most common is plain and cord-marked, which is common in Structure 6.

Structure 4 is a single-set post Mississippian structure with a central hearth (Meyers 2017:6). Also, Structure 4 is located near Structure 1. The temper of the ceramics is mostly shell, grit and grog with some grit and grog, and the surface decoration is a mixture of plain and cord-marked, indicating an early and middle occupation, contemporaneous with Structure 6. The vessel morphological analysis revealed a little more diversity than that seen in Structure 2, with bowls, jars, and a plate (n=17). Other artifacts in this structure included a small range of tools (one graver, one hammerstone, and one chisel) (Meyers 2017:6). Based on the data, this structure is considered domestic in nature. As compared to Structure 6, this structure had more ceramics with of shell, grit and grog temper. The surface decoration is similar to Structure 6 with mostly plain and cord-marked sherds. The vessel morphology has more diversity with a mixture of bowls, jars, and a plate, whereas Structure 6 has mostly bowls and plates. Structure 4's larger diversity of vessel types may mean it was related to activities occurring in Structure 1 in some way. If Structure 4 has more of a temper type, it may have had differential access to resources because of the proximity to Structure 1 which may be a feasting area.

It appears that Structure 6 is similar to Structure 4 because of the two interior posts and the central hearth. Also, there seems to have been an increased interaction occurring with Radford people and other people, possibly Dan River or Pisgah based on the presence of sand-tempered and cord-marked sherds. Based on the ceramics, it appears this interaction may not be restricted to households because every household is showing similar diversity (Table 22). If households were not restricted in their interactions, this suggests a more autonomous political economy and fits in with the frontier model (Herr 2001; Meyers 2017). According to Meyers (2017:8), change occurred at the site during the middle occupation, where interaction increased with other groups and craft production and mound building began. Based on the location and ceramic types of Structure 6, it could be indicative of a possible Radford occupation at this Mississippian site. At the same time, the people within this house structure seemed to have wanted to be part of the community, but still have some distance. The evidence of expansion, solid interaction with other groups in the area as shown through the pottery, and the autonomy of the households, also shown through ceramic remains, reveal the site during the middle period was both expanding and interacting with little centralized control.

Conclusion

Based on the temper, surface decoration and vessel morphology, I was able to answer the question of when Structure 6 was occupied, identify type of household, and compare Structure 6 to contemporaneous structures at the site. Based on the temper and surface decoration, I was able to partially date the structures based on previous ceramics analyses and radiocarbon dating at the site (Meyers 2011:254).

Table 22. Predominant Ceramic Types of Structures During Occupation Periods.				
Occupation	**Structure**	**Predominant Ceramic Type**	**Other**	**Structure Type**
Early	5	Grit and grog; plain and cord-marked	Under mound	Probably domestic
	2a	Grit and grog; plain with nodes	Occupied throughout the period	Probably domestic
	4	Shell, girt and grog; plain and cord-marked	Occupied late in period	Domestic
	6	Shell, grit and grog; plain and cord-marked	Occupied late in period	Probably domestic
Middle	1	Shell, grit and grog; plain and cord-marked	Occupied throughout the period	Specialized structure
	2b	Shell, grit and grog; plain and some cord-marked	Occupied throughout the period	Probably domestic
	3	Mixed grit temper; plain and cord-marked	Occupied throughout the period	Domestic
	4	Shell, grit and grog; plain and cord-marked	Occupied throughout the period	Domestic
	6	Shell, grit and grog; plain and cord-marked	Occupied throughout the period	Probably domestic
Late	2c	Shell, grit and grog; plain and cord-marked	Occupied throughout the period	Domestic

Structure 1 and Structure 4 predominately had shell, grit and grog temper along with surface decorations, that were plain with some cord-marked. Structure 1 was determined through the vessel morphology of mostly bowls and a few pans and the lack of a hearth feature would be more of a specialized area. Structure 4, which is adjacent to Structure 1, has mainly shell, grit and grog temper and plain with cord-marked surface decoration.

A vessel morphology analysis that shows a variety of bowls, pans and jars as well as the presence of a hearth indicates it that is a domestic structure. Structure 2, which contains evidence

of multiple burning and rebuilding episodes, has different temper and surface decorations based on the time period. Structure 2a has grit and grog tempered and plain with nodes surface decoration. Structure 2b has shell, grit and grog tempered and plain with cord-marked surface decoration. Structure 2c has predominately shell with some grit and grog temper and plain with cord-marked surface decoration. Based on the presence of a hearth and wall trench and post molds, it was likely a domestic structure. Structure 3, which has mixed grit tempered and plain with cord-marked surface decorations, was occupied for a short period of time and abandoned. Although the lack of artifacts recovered from this structure make it difficult to identify structure type, it was likely a domestic structure based on the presence of a wall trench and a central hearth. Lastly, Structure 5, which was located under the mound, has predominately grit and grog temper and plain with cord-marked surface decoration. Limited excavations restrict interpretation of this structure, but the presence of post molds and a hearth suggest it was a domestic structure. Structure 6 is located 90 m south of the mound and the furthest structure at the site. Predominately, the temper is shell, grit and grog and plain with cord-marked surface decorations. Based on the presence of the two interior posts, a midden, and a hearth, it was likely a domestic structure. When looking at the temper there appears to be the same access to materials among the households, indicating a lack of centralized control. The structures on this landscape seem to be autonomous households. There appears to be designated areas of production, but not one person or household controlling that production.

It is important to note that the site of Carter Robinson is considered a frontier. At the same time, there seems to have been growth during the middle occupation (A.D. 1300-1350). Based on the other artifacts in the structures, there seem to be specific areas of craft production. Structure 1 are shell bead production areas based on the amount of drills and shell beads

recovered. Structure 2, in the upper level, is a craft production area of shell beads. Structure 3 was swept clean and abandoned, but nothing more can be said beside the structure is domestic. Structure 4 does not have much evidence of craft production, but it can be considered a domestic structure. Structure 5 is under the mound and does not have that much data to say it is a craft production area. Lastly, when looking at Structure 6, it seems to be a domestic structure that most likely interacted with Radford peoples nearby, through intermarriage. Comparing the households might suggest that frontiers household groups have more autonomy and that there is less hierarchical roles as well as restrictions (Herr 2001; Meyers 2011, 2017). There is no evidence that ceramic types were restricted by household, with the possible exception of Structure 4. That evidence, though, combined with evidence of shell bead production in Structure 1 and the upper level of Structure 2 might suggest that the emergence of hierarchical distinctions occurred during the latter part of occupation. Structure 6 is located 90 m south of the mound and the furthest at the site. At a frontier, this would have been a precarious position, and the fact that it is not occupied after the middle of site occupation suggests it may not have been a successful strategy.

CHAPTER VI: SUMMARY AND CONCLUSION

Carter Robinson is a frontier site on the edge of the Mississippian world located in southwestern Virginia that was occupied for 150 years beginning in A.D. 1250. Frontier areas between hierarchical and non-hierarchical groups have the potential to shed light on information about how hierarchies form (Meyers 2017:1). Previous studies at this site have identified social interaction between hierarchical Mississippian groups from the Norris Basin with non-hierarchical indigenous groups from southwest Virginia, known as the Radford culture (A.D. 900-1600) (Meyers 2015:229). This interaction is specifically identified in the ceramic materials, which show a change in temper and surface decoration over time that indicates social interaction occurred (Hegmon 1992:529).

Previous ceramic data from stratigraphic contexts, some of which were also dated using radiocarbon methods, was used to date changes in ceramics that signify social interaction at the site (Meyers 2011, 2017). For this analysis, attribute analysis of ceramics from Structure 6 was used to date the structure. A morphological analysis of vessels allowed for a more precise understanding of structure function (Smith 1978:489) and comparison with contemporaneous structures at the site.

This analysis used the attributes of temper, surface decoration, and vessel form to identify the time of Structure 6's occupation and activities within Structure 6. These data were then used to compare Structure 6 to other structures at the site to better understand site occupation and

household activity. Specifically, I investigated what variation in household activities might mean in terms of site function and interaction with neighboring groups. For these comparisons, previous analyses of ceramics from six structures (Meyers 2011, 2017) were used. Based on the temper of the ceramics in Structure 6, it was occupied during the last part of the early period and throughout the middle period of site occupation. The analysis of vessel morphology showed that Structure 6 is similar to other Mississippian domestic houses. Lastly, when compared to the other structures at the site, Structure 6 is most similar to Structure 4.

The ceramics from Structure 6 are able to give a fuller picture of what was happening at Carter Robinson. The most common temper used was shell, grit and grog (47%) and the second most common was grit and grog (37%). The most common surface decoration was cord-marked (29%) and the second most common was plain (25%). Both the temper and surface decoration can indicate not only time period of the structure, but also degree of interaction with other groups in the area (Meyers 2011:324). Vessel morphology was used to identify activities within the structure and allow it to be compared to other structures. The most common rim angle identified from the rims in Structure 6 was 110-119 degrees (n=18). The most common orifice diameter was too small to determine (n=39), but the second most common was 18 cm (n=2). These attributes are used to identify vessel type (i.e., plate, jar, and bowl). Only nine rims were large enough to determine vessel form and the most common was bowls (n=4), but also pan/plate (n=2) and collared/carinated jar (n=3) were present. The vessel morphology indicates that Structure 6 is a domestic structure.

At the same time, it is important to talk about the interaction between Structure 6 with other structures across the site and other groups outside the village. Structure 6 was established toward the end of the early occupation. Also, its location suggests site expansion occurred at that

time. Structure 6 was mostly occupied during the middle occupation, and it seemed to be the first building located far south of the mound at the site. Structure 1, which contained shell bead production areas, was also occupied at the same time. One reason Structure 6 might not have been occupied during the later occupation due to abandonment of the site, changing relations among households, or possibly the inhabitants became more integrated into the site as a whole, and moved closer to the village. Lastly, the large amount of smoothed sherds suggests de-emphasis of identity may have been important here. Also when looking at the merger of surface decoration and temper of Mississippian and Radford types might suggest that they were trying to attract people to the site (Meyers 2017:9). According to Herr (2001:13), for frontiers to succeed, there needs to be a wealth in people to provide for the people at the site and on the landscape.

Further research is needed to help understand the fuller picture of Structure 6. The identification of the entire structure would allow researchers to determine its size and compare it to other structures. A comparison of postholes with other structures could identify if a variety of construction methods are present at the site. Structure 6 is located furthest from the mound (90 m) which can help better define the southern site boundary and population density of the site. Geophysical data and shovel tests have been able to indicate other structures on the site (Meyers 2011:136-138). Knowing if Structure 6 is the furthest or not can help show how big the site is on the landscape. At the same time, a full excavation of Structure 6 will provide a more complete ceramic assemblage and provide a better picture of what is happening within this structure. For example, the rim sherds could help with understanding the vessel morphology within the structure, specifically if there are areas of activity more clearly delineated within the house. Also, the temper and surface decoration will be able to indicate the degree of interaction between the house structures and other societies nearby.

If additional analyses were completed, they should focus more on examining change through time. This would allow researchers to more fully understand frontiers and possibly how chiefdoms are organized during the Mississippian time period. Social identity is an important factor in understanding social integration, and Carter Robinson may have used the ceramics to attract people to the area (Meyers 2017:9). One limitation to the data are the small number of rim sherds that were available to understand the vessel morphology within the structure (n=9). Another limitation is that only the interior of the structure has been excavated. Being able to see the whole structure can help understand how big this structure is compared to other structures on the landscape. A limitation to the research methods used was the use of attribute and morphological analysis of the ceramic sherds to indicate the time of occupation of the structure. Having radiometric carbon dates will be able to provide a more specific occupation time. A final limitation of the research methods is that only ceramics were examined and not any other artifacts within the structure were examined which limits interpretation of structure activities and relations to others within the village.

According to King and Meyers (2002:114), frontiers "are geographic areas along the edge of advancing or retreating wave fronts of Mississippian forms of organization." Based on past research at Carter Robinson, the analyses of ceramics from Structure 6 can help to explain the degree of interaction happening at frontier sites. For example, the temper being mostly shell, grit and grog and the surface decoration being mostly cord-marked is indicative of Mississippian cultural affiliation; however, the combination of Radford and Mississippian surface decoration and temper types suggests that they were possibly trying to integrate more styles to get other groups to come to the site for labor, such as shell bead production (Meyers 2017:9). The presence of some lithic production occurring here suggests that households were mostly

autonomous, but related to others across the site that were directly engaged in craft production, like Structure 1. The continued studies of frontiers of the Mississippian world can further define how non-hierarchical and hierarchical societies were formed throughout the Mississippian time period (A.D. 1000-1600).

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APPENDIX A
Ceramic Analysis Attributes

This appendix provides a brief description of the attributes recorded for this analysis and reported in this paper. Below is a description of each attribute and information about measurement and recordation of these attributes, if applicable. Attributes for paste and morphology were recorded; paste attributes are discussed first, followed by morphological attributes.

Paste Attributes

Paste attributes included texture, hardness, temper, size, roundness, shape, color, and core type.

Texture: Texture was recorded based on an assessment of aplastic size and density within each sherd. Texture was recorded on a scale of 1-6, based on visual examination of a freshly broken cross section of the sherd:

1 fine
2 medium fine
3 medium
4 medium coarse
5 coarse
6 very coarse

Hardness: Hardness was measured using the Mohs hardness scale, by scratching with reference minerals on a fresh, broken surface of the sherd.

Temper: Aplastic inclusions, or temper, was recorded for each sherd based on a visual examination of a freshly broken cross section. Primary temper, or Material 1, was the most common aplastic material observed in the sherd. A total of six aplastic materials were identified from this collection, and these were coded as follows:

1 shell
2 grog
3 sand
4 grit
5 limestone
6 quartz

Maximum Aplastic Size: Aplastic sizes were recorded with reference to the Wentworth scale (see below). Maximum sizes were recorded and used in the analysis. Unique occurrences of very large grains are not included under maximum aplastic size.

Wentworth scale

Fine pebble 4-8 mm
Granule 2-4 mm
Very coarse sand 1-2 mm
Coarse sand 0.5-1 mm

Medium sand 0.25-0.5 mm
Fine sand 0.125-0.25 mm
Very fine sand 0.0625-0.125 mm
Silt 0.004-0.0625 mm
Clay <0.004 mm

Aplastic Density: Aplastic density was recorded as a volume percent of aplastic visible at 10X magnification (measured using a hand lens), estimated within a 5% range by reference to charts reproduced in Terry and Chilingar 1955:229-234).

Aplastic Roundness: Aplastic roundness was recorded using terms for degree of rounding of grains as seen with a 10X hand lens, based on pictures in Powers (1953:118). These were coded as follows:

1 very angular
2 angular
3 sub-angular
4 sub-rounded
5 rounded
6 well-rounded

Aplastic Shape: Shape of the identified aplastics was classified according to shapes of pebbles published by Zingg (1935). Shape was identified using a 10X hand lens. These were coded as follows:

1 oblate
2 bladed
3 prolate
4 equant

Color: Munsell color determinations of paste color were made on freshly broken cross sections. In the presence of firing, cores or color differences between the interior or exterior walls of the sherd, paste color records the color nearest the exterior surface of the sherd. The Munsell colors were recorded as using the Munsell designations, where the first designation (e.g., 10YR) indicates the hue, the second (i.e., 3) indicates the value, and the third (i.e., 1) indicates the chroma.
Color was recorded for interior and exterior surfaces, as well as core. In some cases, multiple colors for interior and exterior surfaces and cores were recorded, if multiple colors for these areas were present and distinguishable.

Core Type: Core type was measured using Rye's (1981:116) measurement of different core types. Core type was determined by examining a freshly broken edge of sherd in profile. These types were coded as follows:

Core Type (Rye 1981: 116)
1 oxidized, no core (organics not originally present)

2 oxidized, no core (organics may/may not have been originally present)
3 oxidized, organics originally present, diffuse core margins
4 oxidized, organics originally present, diffuse core margins (core more diffuse and thinner than 3)
5 reduced, organics not originally present, diffuse core margin
6 reduced, organics not originally present; no "core"
7 reduced, organics originally present, diffuse core margin
8 reduced, organics may/may not originally present, no core
9 reduced, cooled rapidly in air, sharp core margin
10 reduced, cooled rapidly in air, sharp core margin
11 reduced, cooled rapidly in air, reduced again, cooled rapidly in air, sharp core margins; "double core"

Morphological Attributes

Morphological attributes included the recordation of attributes of basic form, lip form, orifice diameter, sherd thickness, angle of rim and shoulder, and surface treatment. For basic form and surface treatment, the type was recorded as a nominal variable (e.g., plate or bowl for form, cord-marked or smoothed for surface treatment). For lip form, each specific sub-variable (orientation, shape, modification, and appendage [if present]) contained sub-types, and these were given a numerical designation. Orifice and throat diameter were recorded in centimeters, wall and lip thickness in millimeters, and rim and shoulder angle in degrees.

Vessel Form: Vessel Form was identified following Rice (2007) and based on a height to diameter ratio, which were used as general guidelines to allow for variation within vessel form specific to this collection. Four types of forms were recognized in this collection: bowls, jars, plates, and pans. Because the number of identified specimens in the latter two categories were small, and because of the similarity in vessel form (and probably use) of these two categories, plates and pans were combined as one category, plate/pan.

> Bowls: vessels having a height:diameter ratio between 1:3 and 1:1; can be as deep as they are tall.
>
> Jars: vessels having a height:diameter ratio of ; tall narrow forms, tend to be large and used for storage.
>
> Plates/Pans: vessels having a height:diameter ratio of less than 1:5. These forms are not always absolutely flat, but are more open in terms of orifice diameter than either bowls or jars.
>
> Lip Forms: Lip forms are characterized by a combination of attributes, including lip orientation, shape, and modification.

Lip Orientation: lip orientation refers to how the lip is oriented with regard to the rest of the vessel body. Direct lips contain no angle or curvature; everted lips angle away from the body

(greater than 90º angle); inverted lips angle toward the body (less than 90º angle). These were coded as follows:

1 direct
2 everted
3 inverted
8 other
9 indeterminate

Lip Shape: Lip shape refers to the shape as opposed to the orientation of the actual lip. Lip shapes include rounded, tapered (tapering to an interior or exterior), and beveled, which are angular and sharp tapers. Beveled lip shapes can be flat, or can bevel toward the interior or exterior. Lip shapes were coded as follows:

1 rounded
2 tapered
3 beveled
8 other
9 indeterminate

Lip Modification: Lip modification refers to any additions or changes made to the lip itself. These can include thickened, which can also further include categories of interior, exterior, or symmetrical; bolstered, which includes a more delineated joint to the rest of the rim, and can be interior, exterior, or symmetrical; folded, where the lip is folded over the rim, and is sometimes identifiable for a crack where the folded lip joins the rim; and pinched, where the band is pinched together creating a series of modifications to the band. These were coded as follows:

1 thickened
2 bolstered
3 folded
4 pinched
5 other
9 indeterminate

Appendages: Appendages reply to aplastic decorations applied to the pot, although they can also be formed from it (i.e., a handle). Appendages include handles; lugs, which are flat handles on the sides of a vessel used to grasp the vessel with one's fingers or hands; castellations, which are points along the lip; supports, which are not usually on the rims themselves; and nodes, or circular ceramic appliqués affixed to the vessel wall (body, rim, or both). These were coded as follows:

1 handle
2 lug
3 castellations
4 supports
5 nodes

8 other
9 indeterminate

Metric Morphological Attributes

Orifice Diameter: Orifice diameters of vessels were measured to the nearest centimeter by reference to concentric circles inscribed on a diameter gauge. Small sherds, however, could not be measured in this way (sherds less than 8º in arc). Orifice diameter measurement provides the radius of the curvature for a particular arc, which is then doubled to obtain a diameter estimate.

Lip Thickness: The maximum thickness of the vessel lip or rim was measured in tenths of millimeters using a vernier caliper.

Wall or Body Thickness: The maximum thickness of vessel body was measured in tenths of millimeters using a vernier caliper.

Lip Width: Lip width was measured as the maximum distance from the endpoint of the lip to the corner point or point of maximum curvature where the rim joins the vessel neck or body.

Rim Angle: The rim angle was measured as the angle in degrees or the interaction of the line of the exterior vessel wall immediately below the lip with the horizontal. Unrestricted forms are therefore characterized by acute angles and restricted forms by obtuse angles.

Shoulder angle: The angle in degrees between the lines of the exterior surfaces of the neck and upper body at the vessel throat. This measurement was taken on necked forms only.

VITA

Emily Jane Warner

Education

B.A., Anthropology, University of Oklahoma, 2015

Professional Experience

2016-2018 Graduate Teaching Assistant, Department of Anthropology, University of Mississippi.

2017 Graduate Field Assistant, Archaeological Investigations at Carter Robinson (44LE10). University of Mississippi Archaeological Field School, Supervisor: Maureen S. Meyers.

2016-2018 Graduate Lab/Field Assistant, Center of Archaeological Research (CAR). University of Mississippi, Supervisor: Tony Boudreaux.

2014-2015 Intern, Sam Noble Museum of Natural History. University of Oklahoma.

2014 Student Crew Member, Archaeological Investigations at Spiro (34LF40). University of Oklahoma Archaeological Field School, Supervisors: Patrick Livingood, Amanda Regnier and Scott Hammerstedt.

2014-2015 OU in Arezzo Ambassador, University of Oklahoma.

2013 Member of the Students Activity Council, Arezzo, Italy. University of Oklahoma.

2012 Volunteer Lab Assistant, Oklahoma Archaeology Survey. University of Oklahoma.

Short-Term Experience

2018 Field Assistant for Geophysical Survey at Church Hill in Natchez, MS, Center of Archaeological Research (CAR). University of Mississippi, Supervisor: Tony Boudreaux and Stephen Harris.

2017 Field Assistant for Geophysical Survey at the University of Mississippi Medical Center, Center of Archaeological Research (CAR). University of Mississippi, Supervisor: Tony Boudreaux and Stephen Harris.

2016-2017 Field/Lab Assistant for New Salem Cemetery, Center of Archaeological Research (CAR). University of Mississippi, Supervisor: Tony Boudreaux and Stephen Harris.

Conference Participation

2018 *Financial Media and the Politics of Occidentalism: Argentine Histories of Greek Debt Crisis, 2010-2015.* Co-authored with Marcos Mendoza. Paper presented at the annual meeting of the 53rd Southern Anthropological Society, Chattanooga, Tennessee.

2017 *Building and Burning: Excavations of a Southern Appalachian Mississippian House.* Co-authored with Erin Cagney and Dalton Capps. Poster presented at the 74th annual meeting of the Southeastern Archaeological Conference, Tulsa, Oklahoma.

2014 *A Reanalysis of Grog Tempered Pottery from Spiro's Lower Terrace*. Co-authored with Megan Davis, Maisy Fallon and Shawn Lambert. Poster presented at the annual meeting at the 72nd Plains Anthropological Conference, Fayetteville, Arkansas.

International Experience

2013 Arezzo, Italy, University of Oklahoma. Study Abroad Courses were A HT 3303: Renaissance Art in Italy, HIST 3430: Fascism, Mussolini, and America, HIST 3503: World War II, and ITAL 2113: Intermediate Italian.

Professional Organizations

Lambda Alpha, University of Mississippi, Treasurer, 2017-2018.
Southeastern Archaeological Conference.
Southern Anthropological Conference.
Phi Kappa Phi, University of Mississippi.
Gamma Beta Phi, University of Oklahoma.
Alpha Phi Omega, University of Oklahoma.

Grants and Awards

2018 Jay Johnson Award for Outstanding Anthropology Graduate Student, Department of Anthropology, University of Mississippi.

2017 Summer Graduate Research Assistantship Program, Graduate School, University of Mississippi ($2500).

2017 Graduate Student Travel Award, Graduate Student Council, University of Mississippi ($300).